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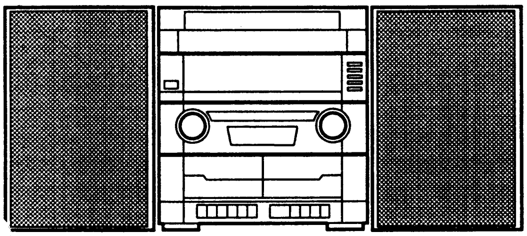
SERVICE

Z-VR55

SERVICE MANUAL



COMPACT DISC STEREO CASSETTE RECEIVER

- BASIC TAPE MECHANISM : TN–21ZFW–1788
- BASIC CD MECHANISM : 6ZG–1 SDSHNM
- TYPE : K

REVISION PUBLISHING

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
Z-VR55	CX-ZVR55	SX-ZR50 SX-CR676	R-8AS01

- If requiring information about the CD mechanism, see Service Manual of 6ZG-1, S/M Code No. 09-984-249-4OT.

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual", S/M Code No. 09-986-284-4FE.

S/M Code No. 09–987–277–2FE

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SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<MW Tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<LW Tuner section>

Tuning range	144kHz to 290 kHz
Usable sensitivity	1400 µV/m
Antenna	Loop antenna

<Amplifier section>

Power output	**Front** Rated : 30 W + 30 W (6 ohms, T.H.D. 1 %, 1 kHz) Reference : 37 W + 37 W (6 ohms, T.H.D. 10 %, 1 kHz) **Rear (Surround)** Rated : 20 W + 20 W (8 ohms, T.H.D. 1 %, 1 kHz) Reference : 25 W + 25 W (8 ohms, T.H.D. 10 %, 1 kHz) **Center** Rated : 20 W (8 ohms, T.H.D. 1 %, 1 kHz) Reference : 25 W (8 ohms, T.H.D. 10 %, 1 kHz)
Total harmonic distortion	0.05 % (25 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX/PHONO IN : 500 mV 5.1 CH INPUT FRONT : 500 mV REAR : 300 mV CENTER : 300 mV SUB WOOFER : 400 mV
Outputs	CD DIGITAL OUT (OPTICAL) SUB WOOFER : 1 V SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS : accepts speakers of 8 - 16 ohms CENTER SPEAKER : accepts speakers of 8 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz - 10000 Hz
Signal to Noise ratio	45 dB (Normal tape peak level, above 400 Hz)
Recording system	AC bias
Heads	Deck 1: Recording/playback head x 1/erase head x 1 Deck 2: Playback head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX–ZR50>

Cabinet type	3 way, bass reflex
Speakers	Woofer: 170 mm cone type Tweeter: 60 mm cone type Super tweeter: 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	280 x 444 x 272 mm
Weight	4.5 kg

<General>

Power requirements	230 V AC, 50 Hz
Power consumption	170 W
Dimensions of main unit (W x H x D)	360 x 394.5 x 381 mm
Weight of main unit	9 kg

- Design and specifications are subject to change without notice.

- DOLBY NR / DOLBY PRO LOGIC
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NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, the secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased 1 V or less using a multimeter or an oscilloscope.

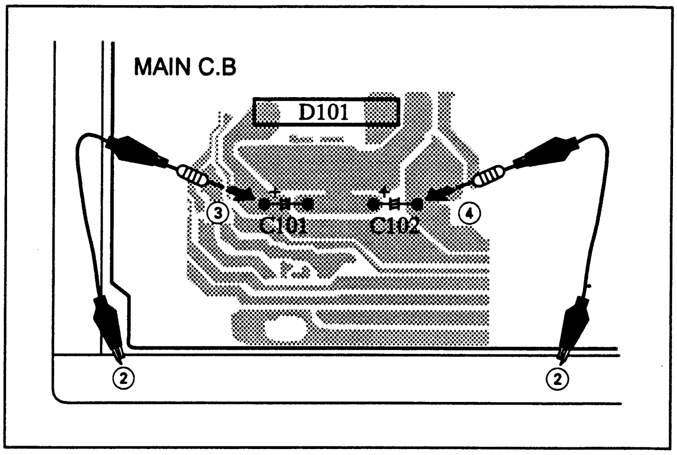


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

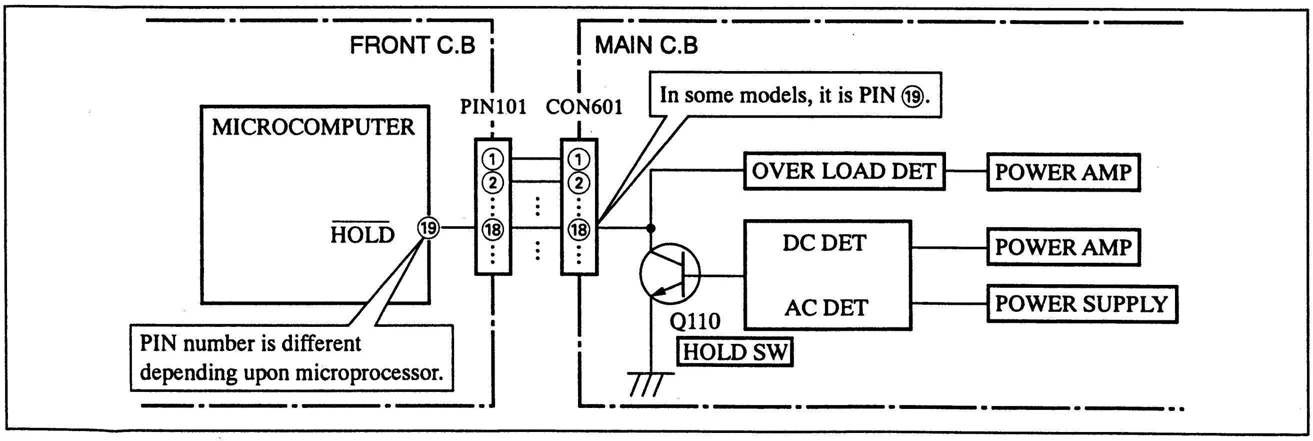


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can leads to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.

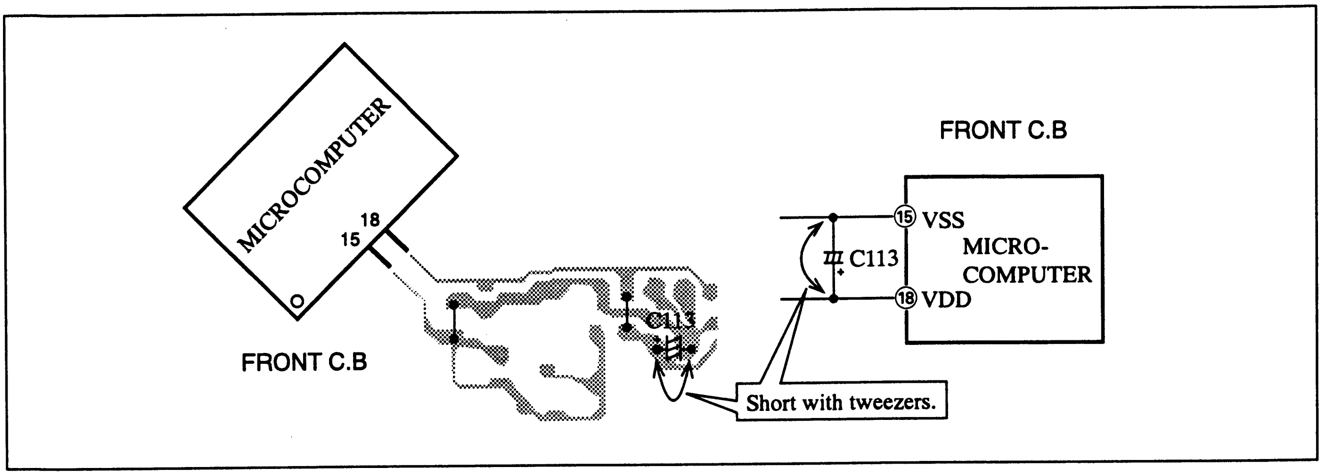


Fig-2-2

② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.

③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

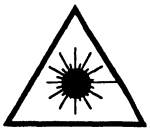
Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on·the rear exterior.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

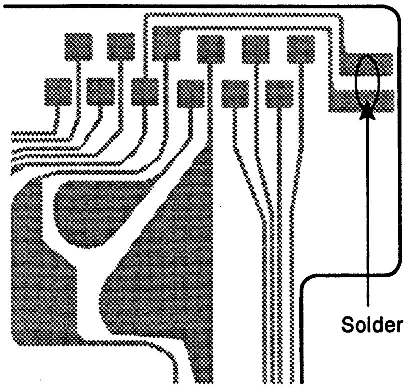
Precaution to replace Optical block

(KSS – 213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.

PICK-UP Assy P.C.B



ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-017-889-010		IC,NJM4558LD
	87-A20-715-010		IC,M62439SP
	87-070-127-110		IC,LC72131 D
	87-A20-913-010		IC,LA1837NL
	87-A20-083-010		IC,BA3835S
	88-MA4-610-010		IC,UPD780228G-018-3BA
	87-NF8-614-010		IC,SPS-442-1-W
	87-017-915-080		C-IC,BU4094BCF
	87-017-917-080		C-IC,BU4066BCF
	87-017-726-080		C-IC,BU4052BCF
	87-A20-853-010		C-IC,M62463FP
TRANSISTOR			
	89-213-702-010		TR,2SB1370 (1.8W)
	89-333-317-880		TR,2SC3331 (0.5W)
	87-A30-198-080		TR,KTC3199GR
	87-A30-196-080		TR,2SC4115SRS
	87-A30-197-080		TR,KTA1267GR
	87-026-219-080		TR,DTA144ES (0.3W)
	87-A30-190-080		TR,CC5551
	87-A30-091-080		FET,2SJ460
	87-A30-090-080		FET,2SK2541
	87-026-218-080		TR,DTC144ES (0.2W)
	87-026-214-080		TR,DTA114YS (0.3W)
	89-113-187-880		TR,2SA1318T/U
	87-A30-087-080		C-FET,2SK2158
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-084-080		TR,CSB1058B
	87-A30-073-080		C-TR,RT1N 141C
	87-026-239-080		C-TR,DTC114TK
	87-A30-075-080		C-TR,2SA1235F
	87-A30-076-080		C-TR,2SC3052F
	87-A30-108-010		TR,2SB1626
	87-A30-109-010		TR,2SD2495
	87-A30-214-010		TR,2SB1344
	87-A30-215-010		TR,2SD2025
	87-A30-104-080		C-TR,RT1N441C
	87-026-223-080		C-TR,DTC143TK
	89-305-352-380		TR,2SC535(B/C)
	87-026-269-080		TR,DTA114ES
	87-A30-092-080		FET,2SK439E/F
	87-A30-164-080		TR,CS2001K
DIODE			
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-435-080		ZENER,MTZJ30D
	87-A40-470-080		DIODE,1SS254
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-466-080		ZENER,MTZJ2.7A
	87-A40-270-080		C-DIODE,MC2838
	87-A40-269-080		C-DIODE,MC2836
	87-017-932-080		ZENER,MTZJ6.2B
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-442-080		ZENER,MTZJ9.1A
	87-A40-348-080		ZENER,MTZJ3.3A
	87-A40-335-080		ZENER,MTZJ11C T-72
	87-070-178-090		DIODE,1N5402-BD54
	87-A40-234-080		ZENER,MTZJ5.6A
	87-A40-004-080		ZENER,MTZJ16A
MAIN C.B			
C101	87-010-917-090		CAP,E 3300-50 M SMG
C104	87-A10-627-090		CAP,E 2200-50 M SMG
C105	87-018-127-080		CAP, CER 470P-50V
C106	87-010-408-080		CAP, ELECT 47-50V
C107	87-010-384-080		CAP, ELECT 100-25V
C108	87-010-381-080		CAP, ELECT 330-16V
C109	87-010-383-080		CAP, ELECT 33-25V
C110	87-010-383-080		CAP, ELECT 33-25V
C111	87-010-430-080		CAP, ELECT 100-63
C112	87-010-263-080		CAP, ELECT 100-10V
C113	87-010-404-080		CAP, ELECT 4.7-50V
C114	87-010-374-080		CAP, ELECT 47-10V
C122	87-010-383-080		CAP, ELECT 33-25V
C123	87-010-383-080		CAP, ELECT 33-25V
C124	87-018-211-080		CAP, CER 0.01-50
C130	87-018-131-080		CAP, CER 1000P-50V
C207	87-010-546-080		CAP, ELECT 0.33-50V
C208	87-010-546-080		CAP, ELECT 0.33-50V
C209	87-018-133-080		CAPACITOR,CER 4700P-16V
C210	87-018-133-080		CAPACITOR,CER 4700P-16V
C211	87-010-404-080		CAP, ELECT 4.7-50V
C212	87-010-404-080		CAP, ELECT 4.7-50V
C213	87-A10-899-080		CAP,E 47-25 M BP SME
C214	87-A10-899-080		CAP,E 47-25 M BP SME
C219	87-010-544-080		CAP, ELECT 0.1-50V
C220	87-010-544-080		CAP, ELECT 0.1-50V
C221	87-018-211-080		CAP, CER 0.01-50
C222	87-018-211-080		CAP, CER 0.01-50
C223	87-018-134-080		CAPACITOR,TC-U 0.01-16
C224	87-018-134-080		CAPACITOR,TC-U 0.01-16
C229	87-018-123-080		CAP, CER 220P-50V
C230	87-018-123-080		CAP, CER 220P-50V
C235	87-018-209-080		CAP, CER 0.1-50V
C236	87-018-209-080		CAP, CER 0.1-50V
C237	87-018-134-080		CAP,TC-U 0.01-16
C239	87-010-402-080		CAP, ELECT 2.2-50V
C240	87-010-402-080		CAP, ELECT 2.2-50V
C253	87-018-131-080		CAP, CER 1000P-50V
C254	87-018-131-080		CAP, CER 1000P-50V
C255	87-018-115-080		CAP, CER 47P-50V
C256	87-018-115-080		CAP, CER 47P-50V
C257	87-018-119-080		CAP, CER 100P-50V
C258	87-018-119-080		CAP, CER 100P-50V
C301	87-018-195-080		CAP, CER 1200P-16V
C302	87-018-195-080		CAP, CER 1200P-16V
C303	87-018-195-080		CAP, CER 1200P-16V
C304	87-018-195-080		CAP, CER 1200P-16V
C307	87-010-263-080		CAP, ELECT 100-10V
C308	87-010-263-080		CAP, ELECT 100-10V
C309	87-018-115-080		CAP, CER 47P-50V
C310	87-018-115-080		CAP, CER 47P-50V
C315	87-010-374-080		CAP, ELECT 47-10V
C317	87-010-546-080		CAP, ELECT 0.33-50V
C318	87-010-546-080		CAP, ELECT 0.33-50V
C323	87-018-209-080		CAP, CER 0.1-50V
C325	87-018-209-080		CAP, CER 0.1-50V
C326	87-018-209-080		CAP, CER 0.1-50V
C327	87-018-209-080		CAP, CER 0.1-50V
C360	87-010-401-080		CAP, ELECT 1-50V
C361	87-010-374-080		CAP, ELECT 47-10V
C401	87-010-401-080		CAP, ELECT 1-50V
C402	87-010-401-080		CAP, ELECT 1-50V
C403	87-018-118-080		CAP,TC-U 82P-50 B
C404	87-018-118-080		CAP,TC-U 82P-50 B
C411	87-010-405-080		CAP, ELECT 10-50V
C412	87-010-405-080		CAP, ELECT 10-50V
C452	87-010-382-080		CAP, ELECT 22-25V
C458	87-018-131-080		CAP, CER 1000P-50V
C459	87-018-128-080		CAP, CERA-SOL SS 560P
C461	87-018-126-080		CAP,TC-U 390P-50 B
C462	87-018-126-080		CAP,TC-U 390P-50 B
C601	87-018-195-080		CAP, CER 1200P-16V
C602	87-018-195-080		CAP, CER 1200P-16V
C611	87-010-545-080		CAP, ELECT 0.22-50V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C612	87-010-545-080		CAP, ELECT 0.22-50V
C613	87-010-545-080		CAP, ELECT 0.22-50V
C614	87-010-545-080		CAP, ELECT 0.22-50V
C615	87-018-104-080		CAP,TC-U 10P-50 SL
C616	87-010-408-080		CAP, ELECT 47-50V
C617	87-010-408-080		CAP, ELECT 47-50V
C701	87-010-404-080		CAP, ELECT 4.7-50V
C702	87-018-134-080		CAPACITOR,TC-U 0.01-16
C703	87-018-134-080		CAPACITOR,TC-U 0.01-16
C704	87-018-131-080		CAP, CER 1000P-50V
C705	87-018-131-080		CAP, CER 1000P-50V
C706	87-018-131-080		CAP, CER 1000P-50V
C707	87-010-112-080		CAP, ELECT 100-16V
C709	87-010-248-080		CAP, ELECT 220-10V
C710	87-010-112-080		CAP, ELECT 100-16V
C712	87-018-149-080		CAP,TC-U 15P-50 CH
C713	87-018-149-080		CAP,TC-U 15P-50 CH
C714	87-010-112-080		CAP, ELECT 100-16V
C715	87-018-119-080		CAP, CER 100P-50V
C746	87-018-134-080		CAP,TC-U 0.10-16
C752	87-018-143-080		CAP,TC-U 4.7P-50 CH
C753	87-010-408-080		CAP, ELECT 47-50V
C756	87-018-134-080		CAP,TC-U 0.01-16
C757	87-018-134-080		CAP,TC-U 0.01-16
C758	87-010-112-080		CAP, ELECT 100-16V
C759	87-018-134-080		CAPACITOR,TC-U 0.01-16
C761	87-010-404-080		CAP, ELECT 4.7-50V
C762	87-010-400-080		CAP, ELECT 0.47-50V
C763	87-010-401-080		CAP, ELECT 1-50V
C764	87-010-401-080		CAP, ELECT 1-50V
C765	87-018-115-080		CAP, CER 47P-50V
C766	87-010-407-080		CAP, ELECT 33-50V
C768	87-018-208-080		CAP 0.047-50F
C769	87-010-403-080		CAP, ELECT 3.3-50V
C771	87-010-406-080		CAP, ELECT 22-50
C773	87-018-196-080		CAP, CER 1500P-16V
C774	87-010-405-080		CAP, ELECT 10-50V
C783	87-018-202-080		CAP.CERAM.6800PF
C784	87-018-202-080		CAP.CERAM.6800PF
C785	87-010-405-080		CAP, ELECT 10-50V
C786	87-010-405-080		CAP, ELECT 10-50V
C787	87-018-196-080		CAP, CER 1500P-16V
C788	87-018-196-080		CAP, CER 1500P-16V
C789	87-010-403-080		CAP, ELECT 3.3-50V
C790	87-010-403-080		CAP, ELECT 3.3-50V
C801	87-018-134-080		CAPACITOR,TC-U 0.01-16
C802	87-018-134-080		CAPACITOR,TC-U 0.01-16
C803	87-018-134-080		CAPACITOR,TC-U 0.01-16
C804	87-018-134-080		CAPACITOR,TC-U 0.01-16
C808	87-018-134-080		CAPACITOR,TC-U 0.01-16
C809	87-018-134-080		CAPACITOR,TC-U 0.01-16
C810	87-018-134-080		CAPACITOR,TC-U 0.01-16
C811	87-018-134-080		CAPACITOR,TC-U 0.01-16
C812	87-010-408-080		CAP, ELECT 47-50V
C813	87-018-131-080		CAP, CER 1000P-50V
C921	87-018-134-080		CAPACITOR,TC-U 0.01-16
C922	87-018-099-080		CAP CERA 3.9P-50
C923	87-018-102-080		CAP,TC-U 6.8P-50 SL
C924	87-014-049-080		CAP,PP 470P-100 J
C937	87-018-134-080		CAPACITOR,TC-U 0.01-16
C938	87-018-134-080		CAPACITOR,TC-U 0.01-16
CF801	87-008-423-010		CERAMIC FILTER, SFE10.7
CF802	82-785-747-010		CF MS2 GHY R
PIN301	87-099-827-010		CONN,3P S2M-3W
PIN351	87-099-832-010		CONN,8P S2M-8W
CON351	86-NF7-640-010		CONN ASSY,8P-RPB
CON601	87-099-719-010		CONN,30P TYK-B(X)
CON602	87-099-194-010		CONN,6P 6216V
FB301	87-008-372-080		FILTER, EMI BL OIBNI
FB303	87-008-372-080		FILTER, EMI BL OIRNI

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
FB601	87-008-372-080		FILTER, EMI BL OIRNI
FFE801	A8-6ZA-191-130		6ZA-1 FEENM
J201	87-A60-483-010		JACK,DIA6.3 BLK ST W/S KM
J202	87-033-240-010		TERMINAL,SP 4P32SV1-05
J601	87-A60-398-010		JACK,PIN 2P R/W HSP-242V24
J801	87-033-230-010		TERMINAL,ANT AJ-2016
L201	87-003-383-010		COIL,1UH-S
L202	87-003-383-010		COIL,1UH-S
L451	87-007-342-010		COIL,OSC 85K BIAS
L701	87-005-847-080		COIL,2.2UH(CECS)
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A90-733-010		FLTR,PCFAZH-450 (TOK)
L801	87-005-847-080		COIL,2.2UH(CECS)
L941	87-A50-020-010		COIL,ANT LW(COI)
L942	87-A50-019-010		COIL,OSC LW(COI)
L981	87-NF4-651-010		COIL,AM PACK2N(TOM)
R126	87-022-200-080		RESISTOR, METAL 0.56 1W
R223	87-A00-258-080		RES,M/F 0.22-1W J
R224	87-A00-258-080		RES,M/F 0.22-1W J
R249	87-A00-258-080		RES,M/F 0.22-1W J
R250	87-A00-258-080		RES,M/F 0.22-1W J
SFR451	87-A90-432-080		SFR,30K H NVZ6TLTA
SFR452	87-A90-432-080		SFR,30K H NVZ6TLTA
TC942	87-011-221-080		CAP, TRIMMER 30P
W101	83-NE2-618-110		F-CABEL,5P-2.5
WH102	87-A90-460-010		HLDR,WIRE 2.5-7P
X701	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

FRONT C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C150	87-010-196-080		CHIP CAPACITOR,0.1-25
C151	87-010-196-080		CHIP CAPACITOR,0.1-25
C152	87-010-196-080		CHIP CAPACITOR,0.1-25
C153	87-010-196-080		CHIP CAPACITOR,0.1-25
C154	87-010-196-080		CHIP CAPACITOR,0.1-25
C201	87-018-209-080		CAP, CER 0.1-50V
C203	87-010-198-080		CAP, CHIP 0.022
C204	87-018-127-080		CAP, CER 470P-50V
C205	87-010-316-080		C-CAP,S 33P-50 CH
C206	87-010-318-080		C-CAP,S 47P-50 CH
C207	87-010-312-080		C-CAP,S 15P-50 CH
C208	87-010-196-080		CHIP CAPACITOR,0.1-25
C209	87-010-494-040		CAP,E 1-50 GAS
C210	87-010-248-040		CAP,E 220-10 SME
C211	87-010-194-080		CAP, CHIP 0.047
C212	87-010-263-040		CAP,E 100-10
C214	87-010-405-040		CAP,E 10-50
C301	87-010-401-040		CAP,E 1-50 SME
C354	87-010-196-080		CHIP CAPACITOR,0.1-25
C355	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-010-406-040		CAP,E 22-50 M SME
C402	87-010-406-040		CAP,E 22-50 M SME
C403	87-010-408-080		CAP,E 47-50 SME
C404	87-010-194-080		CAP, CHIP 0.047
C405	87-010-246-040		CAP,E 47-35 SME
C406	87-018-134-080		CAPACITOR,TC-U 0.01-16
C407	87-010-408-080		CAP,E 47-50 SME
C601	87-010-404-040		CAP,E 4.7-50 SME
C602	87-010-404-040		CAP,E 4.7-50 SME
C609	87-010-213-080		C-CAP,S 0.015-50 B
C610	87-010-213-080		C-CAP,S 0.015-50 B
C611	87-010-545-040		CAP,E 0.22-50 SME
C612	87-010-545-040		CAP,E 0.22-50 SME
C613	87-010-545-040		CAP,E 0.22-50 SME
C614	87-010-545-040		CAP,E 0.22-50 SME
C615	87-010-154-080		CAP CHIP 10P
C616	87-010-408-040		CAP,E 47-50 SME
C617	87-010-263-040		CAP,E 100-10 M SME
C618	87-010-408-040		CAP,E 47-50 SME
C651	87-012-360-080		C-CAP,S 1-10 FZF

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C652	87-012-360-080		C-CAP,S 1-10 FZF
C936	87-012-140-080		C-CAP,S 470P-50 J CH
C937	87-012-140-080		C-CAP,S 470P-50 J CH
C938	87-012-140-080		C-CAP,S 470P-50 J CH
C939	87-012-140-080		C-CAP,S 470P-50 J CH
C940	87-012-140-080		C-CAP,S 470P-50 J CH
C941	87-012-140-080		C-CAP,S 470P-50 J CH
C942	87-012-140-080		C-CAP,S 470P-50 J CH
C943	87-012-140-080		C-CAP,S 470P-50 J CH
C944	87-012-140-080		C-CAP,S 470P-50 J CH
C945	87-012-140-080		C-CAP,S 470P-50 J CH
C946	87-012-140-080		C-CAP,S 470P-50 J CH
C947	87-012-140-080		C-CAP,S 470P-50 J CH
C948	87-012-140-080		C-CAP,S 470P-50 J CH
CON101	87-099-720-010		CONN,30P TYK-B(P)
CON102	87-A60-139-010		CONN,14P V FE
CON301	87-009-352-010		CONN,9P PH H
CON501	86-NFZ-635-010		CONN ASSY,9P MECHA
CON601	87-099-035-010		CONN,18P 6216 H
FC102	88-914-231-110		FF-CABLE 14P 1.25
FC601	88-918-161-110		FF-CABLE 18P 1.25 160MM
FL401	88-MA4-601-010		FL,BJ611GK
LED209	87-070-201-080		LED,SLP9118C-51-S-T1
LED210	87-070-201-080		LED,SLP9118C-51-S-T1
LED211	87-070-201-080		LED,SLP9118C-51-S-T1
LED212	87-070-201-080		LED,SLP9118C-51-S-T1
LED213	87-070-197-080		LED,SLP7118C-51-S-P GRN
LED214	87-070-197-080		LED,SLP7118C-51-S-P GRN
LED215	87-070-201-080		LED,SLP9118C-51-S-T1
LED216	87-070-201-080		LED,SLP9118C-51-S-T1
LED217	87-070-201-080		LED,SLP9118C-51-S-T1
LED218	87-070-201-080		LED,SLP9118C-51-S-T1
LED219	87-070-201-080		LED,SLP9118C-51-S-T1
LED220	87-070-201-080		LED,SLP9118C-51-S-T1
R301	87-029-129-010		RES,FUSE 3.3-1/4WJ
S400	87-A90-095-080		SW,TACT EVQ11G04M
S401	87-A90-095-080		SW,TACT EVQ11G04M
S402	87-A90-095-080		SW,TACT EVQ11G04M
S403	87-A90-095-080		SW,TACT EVQ11G04M
S404	87-A90-095-080		SW,TACT EVQ11G04M
S405	87-A90-095-080		SW,TACT EVQ11G04M
S406	87-A90-095-080		SW,TACT EVQ11G04M
S407	87-A90-095-080		SW,TACT EVQ11G04M
S408	87-A90-095-080		SW,TACT EVQ11G04M
S409	87-A90-095-080		SW,TACT EVQ11G04M
S410	87-A90-095-080		SW,TACT EVQ11G04M
S411	87-A90-095-080		SW,TACT EVQ11G04M
S412	87-A90-095-080		SW,TACT EVQ11G04M
S413	87-A90-095-080		SW,TACT EVQ11G04M
S414	87-A90-095-080		SW,TACT EVQ11G04M
S415	87-A90-095-080		SW,TACT EVQ11G04M
S416	87-A90-095-080		SW,TACT EVQ11G04M
S417	87-A90-095-080		SW,TACT EVQ11G04M
S418	87-A90-095-080		SW,TACT EVQ11G04M
S419	87-A90-095-080		SW,TACT EVQ11G04M
S420	87-A90-095-080		SW,TACT EVQ11G04M
S421	87-A90-095-080		SW,TACT EVQ11G04M
S422	87-A90-095-080		SW,TACT EVQ11G04M
S423	87-A90-095-080		SW,TACT EVQ11G04M
S424	87-A90-095-080		SW,TACT EVQ11G04M
S425	87-A90-095-080		SW,TACT EVQ11G04M
S426	87-A90-095-080		SW,TACT EVQ11G04M
S427	87-A90-095-080		SW,TACT EVQ11G04M
S428	87-A90-095-080		SW,TACT EVQ11G04M
SFR301	87-024-169-080		SEMI-FIXED RESISTOR, 2.2K
SW201	87-A90-535-010		SW,RTRY EC16B24304
SW202	87-A90-791-010		SW,RTRY EC16B12204 ENCORDER
VR501	88-MAR-601-010		VR,SL 50KW RS15111
X201	87-A70-075-080		VIB,CER 4.19MHZ CRHF

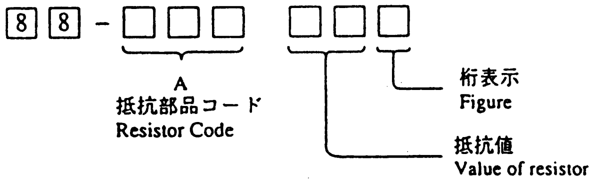
PRO C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C101	87-012-368-080		C-CAP,S 0.1-50 Z F
C102	87-012-368-080		C-CAP,S 0.1-50 Z F
C103	87-010-917-090		CAP,E 3300-50 M SMG
C104	87-010-917-090		CAP,E 3300-50 M SMG
C105	87-010-196-080		C-CAP,S 0.1-25 Z F
C106	87-010-196-080		C-CAP,S 0.1-25 Z F
C109	87-010-188-080		C-CAP,S 6800P-50 K B
C112	87-012-368-080		C-CAP,S 0.1-50 FZ
C113	87-012-368-080		C-CAP,S 0.1-50 FZ
C207	87-010-402-080		CAP,E 2.2-50 M SME
C208	87-010-402-080		CAP,E 2.2-50 M SME
C209	87-010-183-080		C-CAP,S 2700P-50 K B
C210	87-010-183-080		C-CAP,S 2700P-50 K B
C211	87-010-404-080		CAP,E 4.7-50 M SME
C212	87-010-404-080		CAP,E 4.7-50 M SME
C215	87-010-322-080		C-CAP,S 100P-50 J CH GRM
C216	87-010-322-080		C-CAP,S 100P-50 J CH GRM
C217	87-010-408-080		CAP,E 47-50 M SME
C218	87-010-408-080		CAP,E 47-50 M SME
C219	87-A10-596-080		C-CAP,S 100P-100 J CH
C220	87-A10-596-080		C-CAP,S 100P-100 J CH
C221	87-A10-899-080		CAP,E 47-25 M BP
C222	87-A10-899-080		CAP,E 47-25 M BP
C223	87-010-544-080		CAP,E 0.1-50 M SME
C224	87-010-544-080		CAP,E 0.1-50 M SME
C225	87-010-993-080		C-CAP,S 0.056-25 K B
C226	87-010-993-080		C-CAP,S 0.056-25 K B
C227	87-010-196-080		C-CAP,S 0.1-25 Z F
C228	87-010-196-080		C-CAP,S 0.1-25 Z F
C233	87-010-263-080		CAP,E 100-10 SME
C234	87-010-263-080		CAP,E 100-10 SME
C307	87-010-402-080		CAP,E 2.2-50 M SME
C309	87-010-183-080		C-CAP, 2700P-50 K B
C311	87-010-404-080		CAP,E 4.7-50 M SME
C315	87-010-322-080		C-CAP,S 100P-50 J CH GRM
C317	87-010-406-080		CAP,E 22-50 M SME
C319	87-A10-812-080		C-CAP,S 220P-200 J C
C321	87-A10-899-080		CAP,E 47-25 M BP
C323	87-010-544-080		CAP,E 0.1-50 M SME
C325	87-010-993-080		C-CAP,S 0.056-25 K B
C327	87-010-196-080		C-CAP,S 0.1-25 Z F
C333	87-010-263-080		CAP,E 100-10 SME
C400	87-010-378-080		CAP,E 10-16 M SME
C401	87-010-374-080		CAP,E 47-10 M SME
C402	87-010-196-080		C-CAP,S 0.1-25 Z F
C403	87-010-154-080		C-CAP,S 10P-50 D CH
C404	87-010-374-080		CAP,E 47-10 M SME
C405	87-010-196-080		C-CAP,S 0.1-25 Z F
C407	87-010-154-080		C-CAP,S 10P-50 D CH
C408	87-010-545-080		CAP,E 0.22-50 M SME
C410	87-010-546-080		CAP,E 0.33-50 SME
C413	87-010-196-080		C-CAP,S 0.1-25 Z F
C415	87-010-400-080		CAP,E 0.47-50 M SME
C416	87-010-400-080		CAP,E 0.47-50 M SME
C418	87-010-401-080		CAP,E 1-50 M SME
C419	87-010-260-080		CAP,E 47-25 SME
C421	87-010-378-080		CAP,E 10-16 M SME
C422	87-010-378-080		CAP,E 10-16 M SME
C501	87-010-176-080		C-CAP,S 680P-50 J SL
C502	87-010-176-080		C-CAP,S 680P-50 J SL
C503	87-A10-804-080		C-CAP,S 0.1-25 J B
C504	87-A10-804-080		C-CAP,S 0.1-25 J B
C505	87-A10-804-080		C-CAP,S 0.1-25 J B
C506	87-A10-804-080		C-CAP,S 0.1-25 J B
C509	87-010-112-080		CAP,E 100-16 M SME
C510	87-010-221-080		CAP,E 470-10 M SME
C511	87-A10-891-080		CAP,E 4.7-25 SME(K)
C512	87-A10-800-080		C-CAP,S 6800P-16 J B

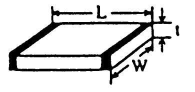
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C513	87-010-374-080		CAP,E 47-10 M SME
C514	87-010-196-080		C-CAP,S 0.1-25 Z F
C515	87-010-401-080		CAP,E 1-50 M SME
C516	87-010-401-080		CAP,E 1-50 M SME
C518	87-010-546-080		CAP,E 0.33-50 SME
C519	87-010-400-080		CAP,E 0.47-50 M SME
C520	87-010-546-080		CAP,E 0.33-50 SME
C521	87-010-546-080		CAP,E 0.33-50 SME
C522	87-018-209-080		CAP,TC U 0.1-50 Z F
C524	87-010-374-080		CAP,E 47-10 M SME
C526	87-010-196-080		C-CAP,S 0.1-25 Z F
C530	87-010-544-080		CAP,E 0.1-50 M SME
C531	87-010-546-080		CAP,E 0.33-50 SME
C532	87-010-971-080		C-CAP,S 4700P-50 J B
C533	87-012-349-080		C-CAP,S 1000P-50 J CH
C538	87-010-971-080		C-CAP,S 4700P-50 J B
C539	87-012-349-080		C-CAP,S 1000P-50 J CH
C540	87-010-401-080		CAP,E 1-50 M SME
C541	87-010-401-080		CAP,E 1-50 M SME
C542	87-A10-799-080		C-CAP,S 5600P-16 J B
C543	87-A10-802-080		C-CAP,S 0.047-16 J B
C544	87-A10-229-080		C-CAP,S 0.68-10 K
C545	87-012-393-080		C-CAP,S 0.22-16 K
C546	87-012-393-080		C-CAP,S 0.22-16 K
C547	87-010-404-080		CAP,E 4.7-50 M SME
C548	87-010-404-080		CAP,E 4.7-50 M SME
C549	87-012-393-080		C-CAP,S 0.22-16 K
C550	87-012-393-080		C-CAP,S 0.22-16 K
C551	87-016-081-080		C-CAP,S 0.1-16 K R
C552	87-A10-802-080		C-CAP,S 0.047-16 J B
C553	87-A10-802-080		C-CAP,S 0.047-16 J B
C554	87-016-081-080		C-CAP,S 0.1-16 K R
C555	87-016-081-080		C-CAP,S 0.1-16 K R
C556	87-A10-801-080		C-CAP,S 0.022-16 J B
C557	87-A10-801-080		C-CAP,S 0.022-16 J B
C558	87-016-081-080		C-CAP,S 0.1-16 K R
C579	87-010-402-080		CAP,E 2.2-50 M SME
C580	87-010-402-080		CAP,E 2.2-50 M SME
C581	87-010-196-080		C-CAP,S 0.1-25 ZF
C601	87-010-196-080		C-CAP,S 0.1-25 Z F
C602	87-010-196-080		C-CAP,S 0.1-25 Z F
C603	87-010-196-080		C-CAP,S 0.1-25 Z F
C604	87-010-196-080		C-CAP,S 0.1-25 Z F
J201	87-A60-561-010		JACK,PIN 4P W/R,B/O
J601	87-A60-562-010		JACK,PIN 6P W/R
L201	87-003-383-010		COIL,1UH K
L202	87-003-383-010		COIL,1UH K
L301	87-003-383-010		COIL,1UH K
R243	87-A00-258-080		RES,M/F 0.22-1W J
R244	87-A00-258-080		RES,M/F 0.22-1W J
R245	87-A00-258-080		RES,M/F 0.22-1W J
R246	87-A00-258-080		RES,M/F 0.22-1W J
R343	87-A00-258-080		RES,M/F 0.22-1W J
R345	87-A00-258-080		RES,M/F 0.22-1W J
R509	87-022-214-080		C-RES,S 100K-1/10W F
AC1 C.B			
⚠ F1	87-035-364-010		FUSE, 1.6A 250V T
⚠ FC1	87-A90-505-080		FUSE CLAMP,TP00351-51
⚠ FC2	87-A90-505-080		FUSE CLAMP,TP00351-51
⚠ PT101	88-MAR-603-010		PT,EZK
⚠ T1	87-A60-317-010		TERMINAL, 1P MSC
⚠ T2	87-A60-317-010		TERMINAL, 1P MSC
AC2 C.B			
⚠ PR001	87-026-681-080		PROTECTOR,5A 60V 491
⚠ PR002	87-026-681-080		PROTECTOR,5A 60V 491
⚠ PR006	87-A90-195-080		PROTECTOR,7A 491 SERIES 60V
⚠ PR007	87-A90-195-080		PROTECTOR,7A 491 SERIES 60V
WH101	87-A90-460-080		HLDR,WIRE 2.5-7P
SUB C.B			
CNA101	86-ZG1-664-010		CONN,ASSY 5P SUB2

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

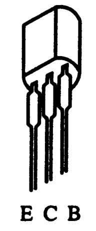
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



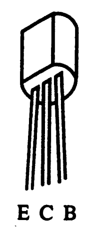
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード：A Resistor Code: A
				外形／Form	L	W	t	
1／16W	1608	±5%	CJ		1.6	0.8	0.45	108
1／10W	2125	±5%	CJ		2	1.25	0.45	118
1／8W	3216	±5%	CJ		3.2	1.6	0.55	128

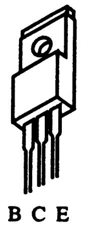
TRANSISTOR ILLUSTRATION



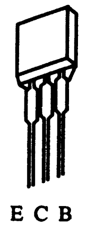
2SC535
CSC2001



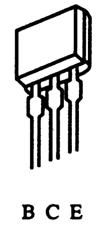
CC5551
CSB1058



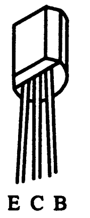
2SB1344
2SB1370
2SB1626
2SD2025
2SD2495



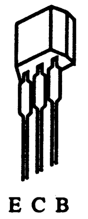
DTA114ES
DTA114YS
DTA144ES
DTC144ES



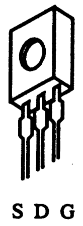
2SC4115



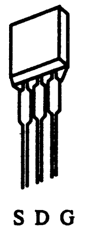
2SC3331
2SA1318



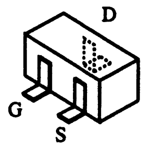
KTA1267
KTC3199



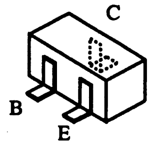
2SJ460



2SK2541
2SK439



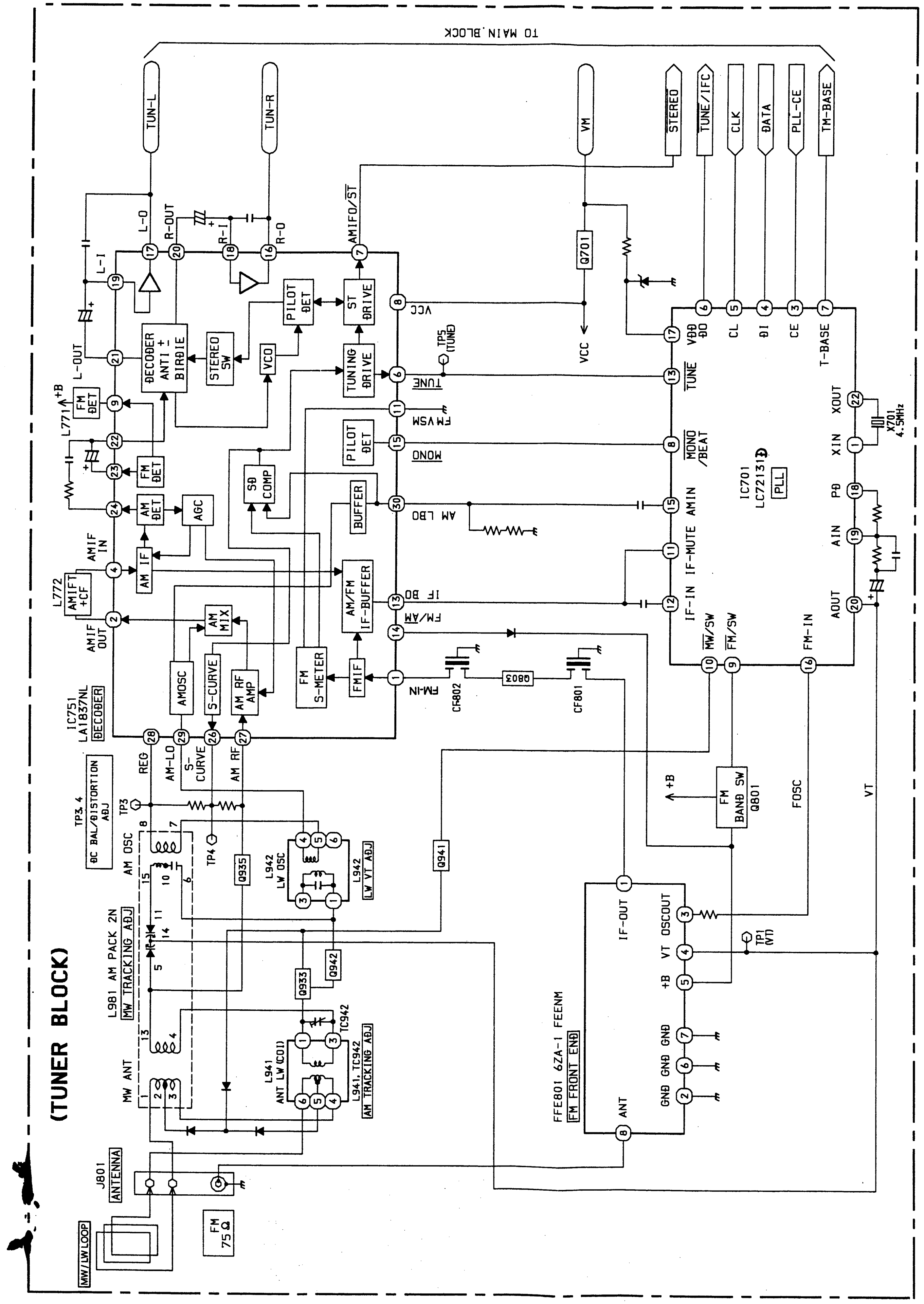
2SK2158



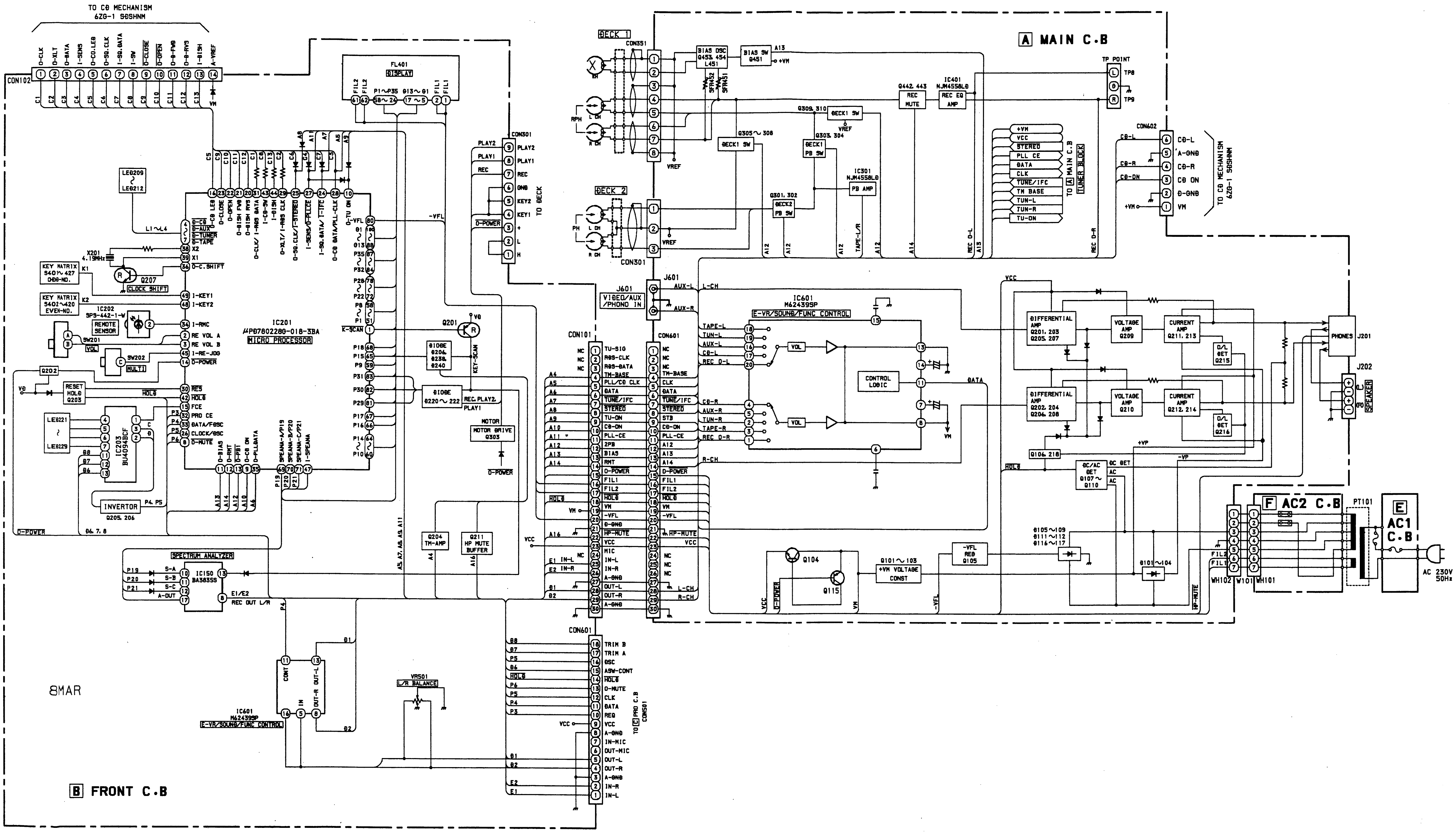
2SA1235
2SC3052
DTC114TK
DTC143TK

RT1N141C
RT1N441C
RT1P141C

BLOCK DIAGRAM – 1 (TUNER)

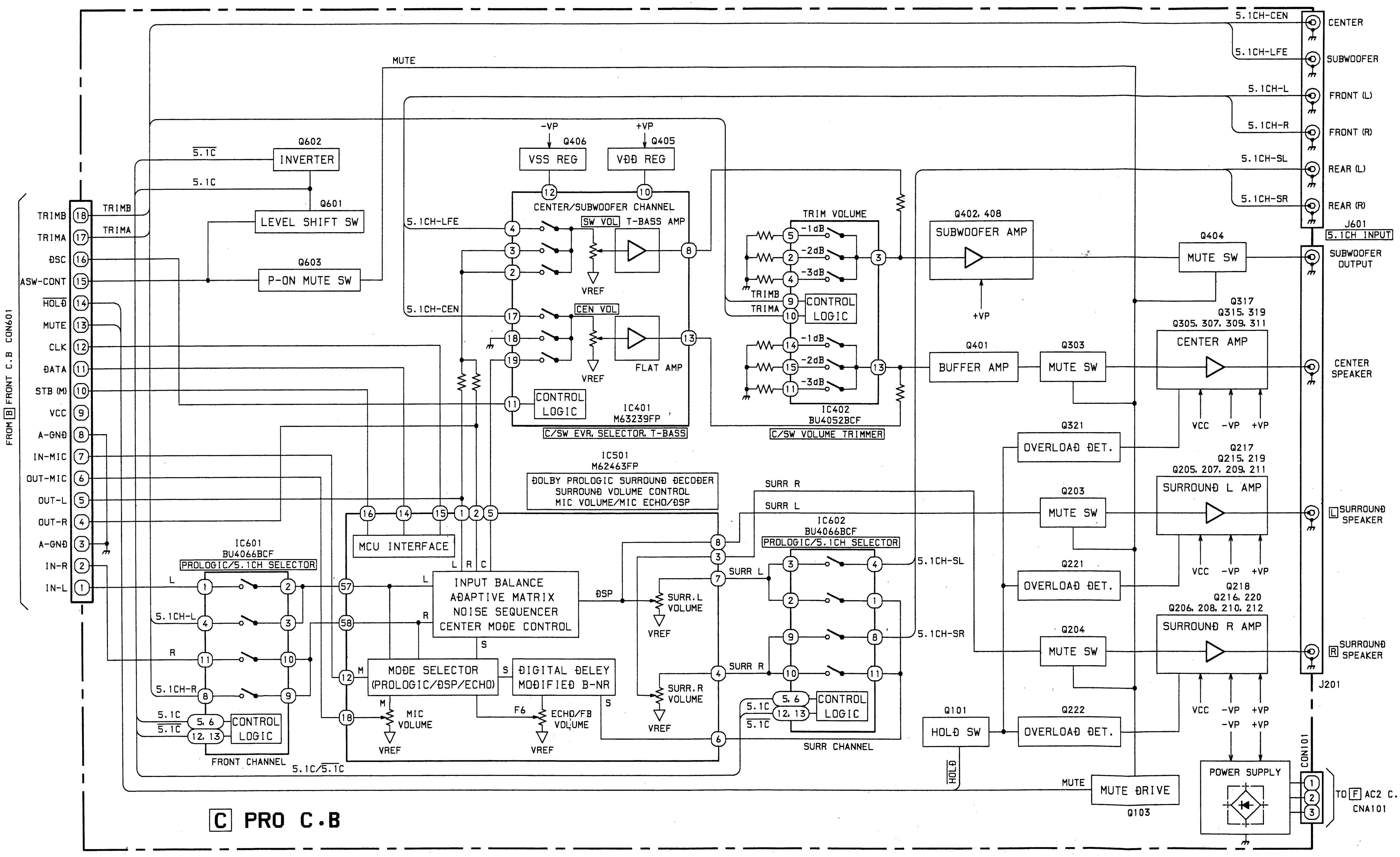

TO MAIN BLOCK
TUN-L
TUN-R
VM
STEREO
TUNE/IFC
CLK
DATA
PLL-CE
TM-BASE
L-O
R-OUT
R-I
R-O
AMIFO/ST
L-I
L-OUT
DECODER ANTI BIRDIE
STEREO SW
VCO
PILOT DET
ST DRIVE
TUNING DRIVE
VCC
TP5 (TUNE)
TUNE
FM VSM
MONO
AM LBO
IF BO
FM/AM
FM-IN
FM DET
AM DET
AGC
SD COMP
BUFFER
AM IF
AMIF IN
AMIF OUT
AMIFT +CF
L771
L772
AM MIX
AMOSC
S-CURVE
AM RF AMP
FM S-METER
FMIF
AM/FM IF-BUFFER
IC751 LA1837NL DECODER
REG
AM-LO
S-CURVE
AM RF
TP3,4 DC BAL/DISTORTION ADJ
TP3
TP4
AM OSC
Q935
L942 LW OSC
L942 LW VT ADJ
L981 AM PACK 2N MW TRACKING ADJ
Q933
Q942
TC942
L941 ANT LW COIL
L941,TC942 AM TRACKING ADJ
MW ANT
(TUNER BLOCK)
J801 ANTENNA
MW/LW LOOP
FM 75Ω
Q701
VDD
CL
DI
CE
T-BASE
XOUT
XIN
X701 4.5MHz
MONO /BEAT
IC701 LC72131D PLL
AMIN
IF-MUTE
IF-IN
MW/SW
FM/SW
FM-IN
PD
AIN
AOUT
CF802
Q803
CF801
Q941
+B
FM BAND SW Q801
FOSC
VT
IF-OUT
OSCOUT
TP1 (VT)
FFE801 6ZA-1 FEENM FM FRONT END
ANT
GND

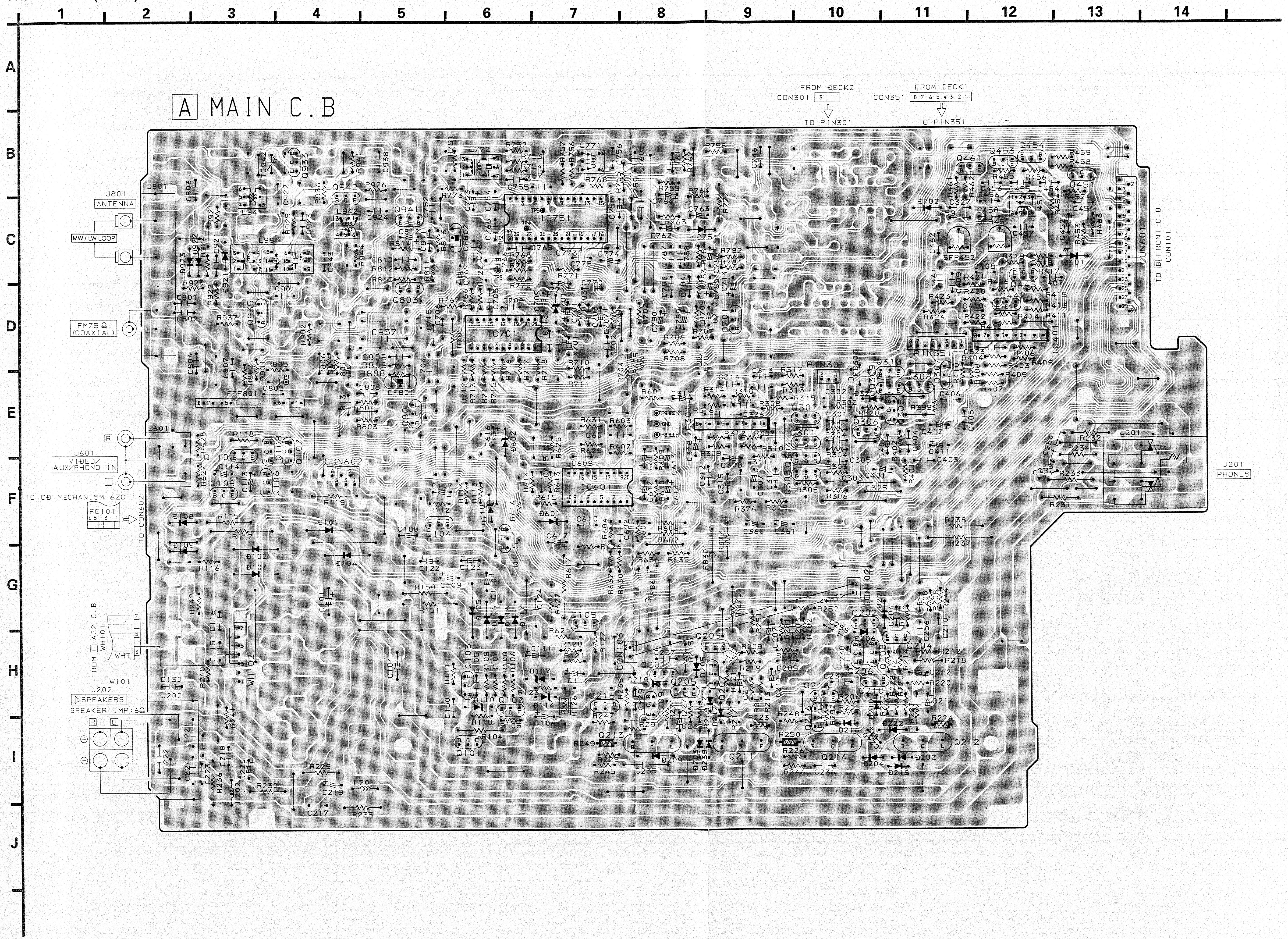
BLOCK DIAGRAM – 2 (MAIN / FRONT)



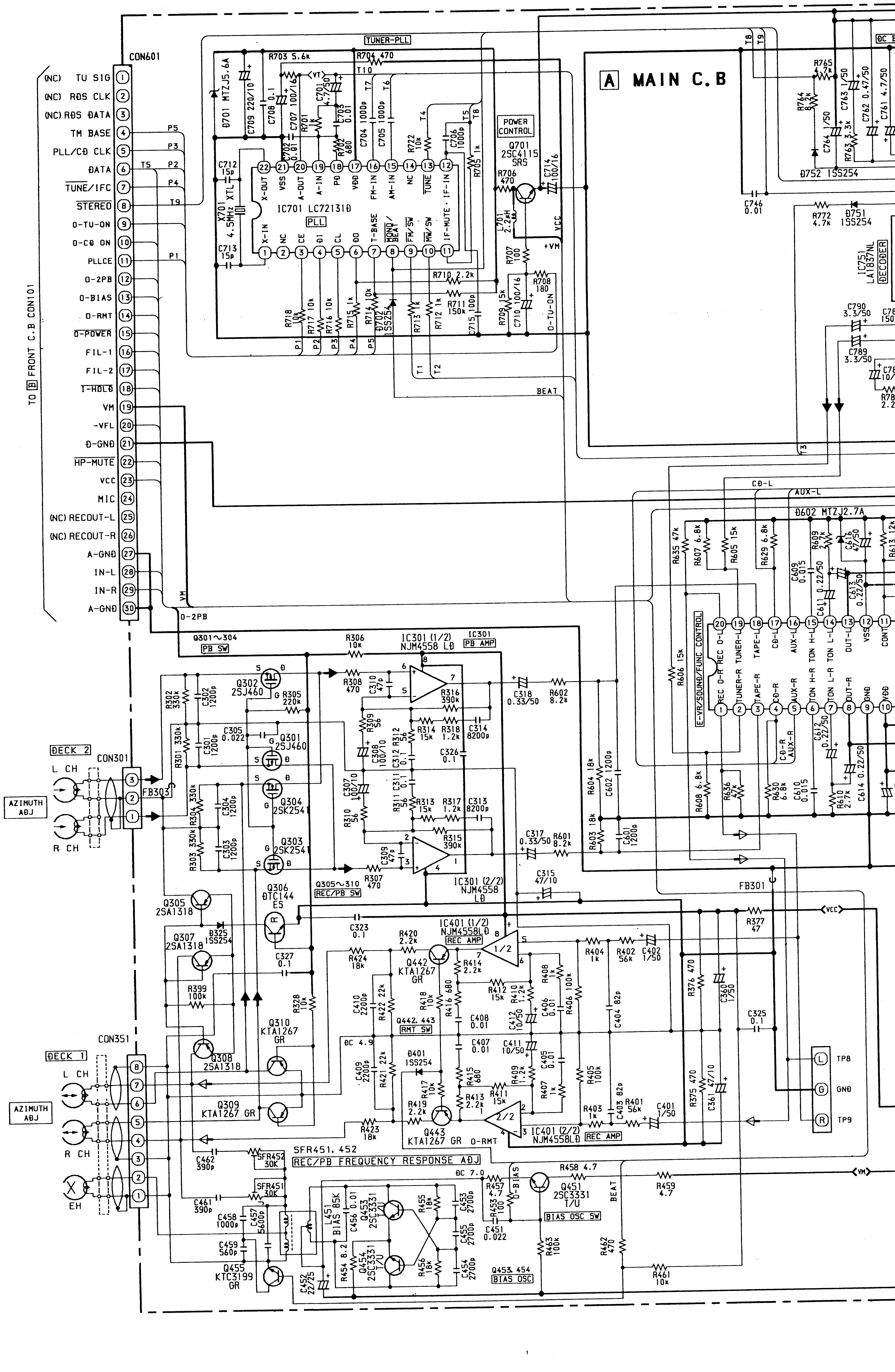
TO CD MECHANISM 6Z0-1 SDSHNM
CON102
FL401 DISPLAY
CON301
TO DECK
IC201 µPD7802280-018-3BA MICRO PROCESSOR
Q201
X201 4.19MHz
KEY MATRIX S401~427 ODD-NO.
KEY MATRIX S402~420 EVEN-NO.
IC202 SPS-442-1-W
REMOTE SENSOR
SW201 VOL
SW202 MULTI
Q207 CLOCK SHIFT
LED209 ~ LED212
LED221 ~ LED229
IC203 BU4094BCF
RESET HOLD Q203
Q202
INVERTOR Q205, 206
SPECTRUM ANALYZER
IC150 BA3835S
DIODE D206, D236, D240
DIODE D220~222
MOTOR DRIVE Q303
Q204 TM-AMP
Q211 HP MUTE BUFFER
CON101
CON601
IC601 M62439SP E-VR/SOUND/FUNC CONTROL
VR501 L/R BALANCE
TO C PRO C.B CON501
8MAR
B FRONT C.B
A MAIN C.B
DECK 1
CON351
DECK 2
BIAS OSC Q453, 454 L451
BIAS SW Q451
Q442, 443 REC MUTE
IC401 NJM4558LD REC EQ AMP
Q305~308 DECK1 SW
Q309, 310 DECK1 SW
Q303, 304 DECK1 PB SW
Q301, 302 DECK2 PB SW
IC301 NJM4558LD PB AMP
TP POINT
TO A MAIN C.B TUNER BLOCK
CON602
TO CD MECHANISM 6Z0-1 SDSHNM
J601 VIDEO/AUX /PHONO IN
IC601 M62439SP E-VR/SOUND/FUNC CONTROL
CONTROL LOGIC
VOL
DIFFERENTIAL AMP Q201, 203 Q205, 207
VOLTAGE AMP Q209
CURRENT AMP Q211, 213
D/L DET Q215
DIFFERENTIAL AMP Q202, 204 Q206, 208
VOLTAGE AMP Q210
CURRENT AMP Q212, 214
D/L DET Q216
PHONES J201
J202 SPEAKER
Q106, 218
DC/AC DET Q107~Q110
Q104
Q115
Q101~103 +VM VOLTAGE CONST
-VFL REG Q105
D105~109 D111~112 D116~117
D101~104
F AC2 C.B
WH102
W101
WH101
PT101
E AC1 C.B
AC 230V 50Hz

BLOCK DIAGRAM – 3 (PRO)

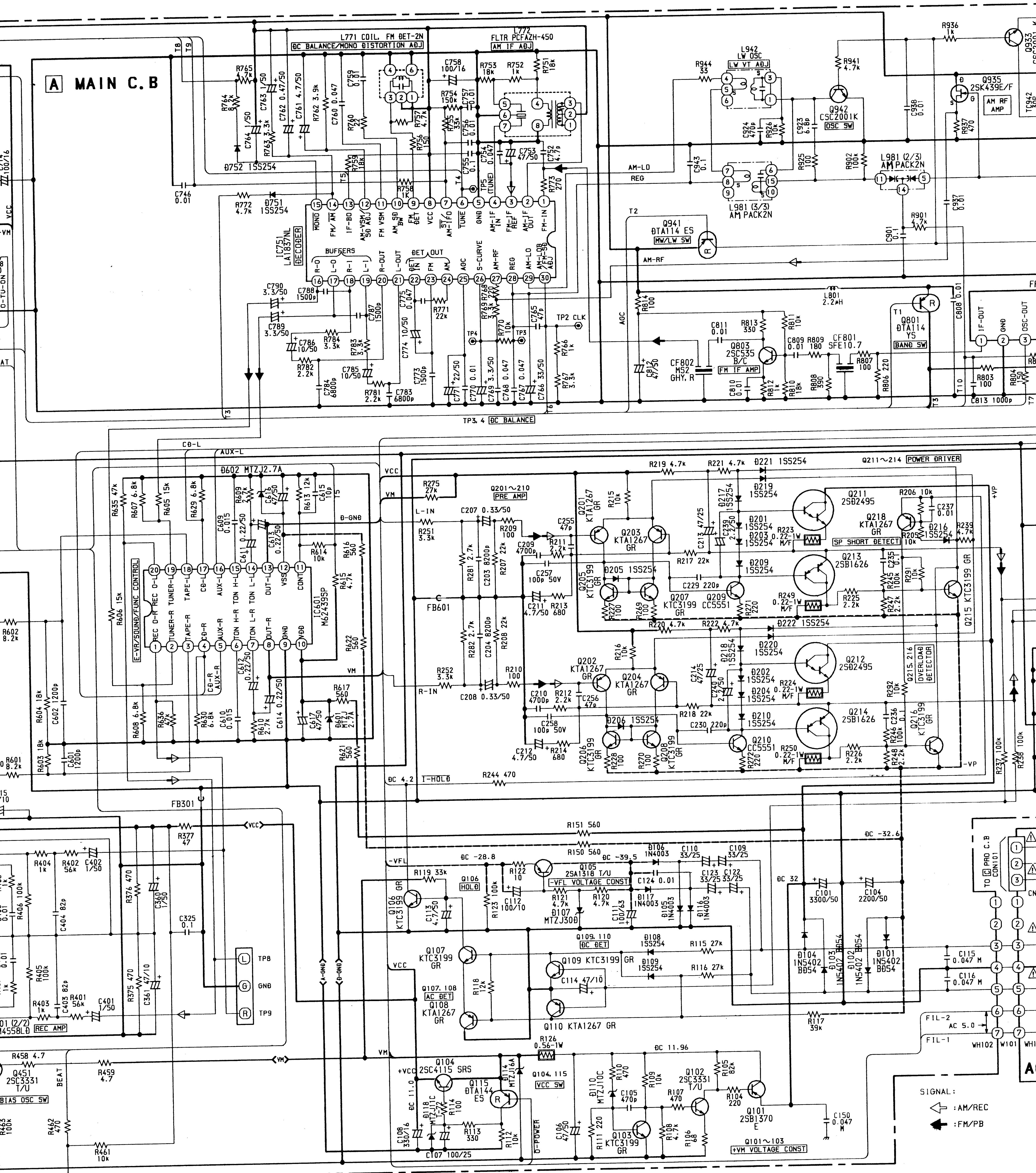

FROM B FRONT C.B CON601
TRIMB
TRIMA
DSC
ASW-CONT
HOLD
MUTE
CLK
DATA
STB (M)
VCC
A-GND
IN-MIC
OUT-MIC
OUT-L
OUT-R
A-GND
IN-R
IN-L
MUTE
5.1C
5.1C
Q602
INVERTER
Q601
LEVEL SHIFT SW
Q603
P-ON MUTE SW
-VP
+VP
Q406
Q405
VSS REG
VDD REG
CENTER/SUBWOOFER CHANNEL
SW VOL
T-BASS AMP
5.1CH-LFE
5.1CH-CEN
VREF
CEN VOL
FLAT AMP
CONTROL LOGIC
IC401
M63239FP
C/SW EVR, SELECTOR, T-BASS
TRIM VOLUME
-1dB
-2dB
-3dB
TRIMB
TRIMA
CONTROL LOGIC
IC402
BU4052BCF
C/SW VOLUME TRIMMER
Q402, 408
SUBWOOFER AMP
+VP
Q401
BUFFER AMP
Q303
MUTE SW
Q404
MUTE SW
5.1CH-CEN
5.1CH-LFE
5.1CH-L
5.1CH-R
5.1CH-SL
5.1CH-SR
CENTER
SUBWOOFER
FRONT (L)
FRONT (R)
REAR (L)
REAR (R)
J601
5.1CH INPUT
SUBWOOFER OUTPUT
Q317
Q315, 319
Q305, 307, 309, 311
CENTER AMP
CENTER SPEAKER
VCC
-VP
+VP
Q321
OVERLOAD DET.
IC501
M62463FP
DOLBY PROLOGIC SURROUND DECODER
SURROUND VOLUME CONTROL
MIC VOLUME/MIC ECHO/DSP
MCU INTERFACE
L R C
IC601
BU4066BCF
PROLOGIC/5.1CH SELECTOR
L
R
5.1CH-L
5.1CH-R
5.1C
5.1C
CONTROL LOGIC
FRONT CHANNEL
5.1C/5.1C
INPUT BALANCE
ADAPTIVE MATRIX
NOISE SEQUENCER
CENTER MODE CONTROL
DSP
S
M
MODE SELECTOR
(PROLOGIC/DSP/ECHO)
DIGITAL DELEY
MODIFIED B-NR
MIC VOLUME
F6
ECHO/FB VOLUME
SURR.L VOLUME
SURR.R VOLUME
SURR R
SURR L
IC602
BU4066BCF
PROLOGIC/5.1CH SELECTOR
5.1CH-SL
5.1CH-SR
5.1C
5.1C
CONTROL LOGIC
SURR CHANNEL
Q217
Q215, 219
Q205, 207, 209, 211
SURROUND L AMP
Q203
MUTE SW
Q221
OVERLOAD DET.
L SURROUND SPEAKER
Q218
Q216, 220
Q206, 208, 210, 212
SURROUND R AMP
Q204
MUTE SW
R SURROUND SPEAKER
J201
Q101
HOLD SW
HOLD
Q222
OVERLOAD DET.
MUTE
MUTE DRIVE
Q103
POWER SUPPLY
CON101
TO F AC2 C.B
CNA101
C PRO C・B

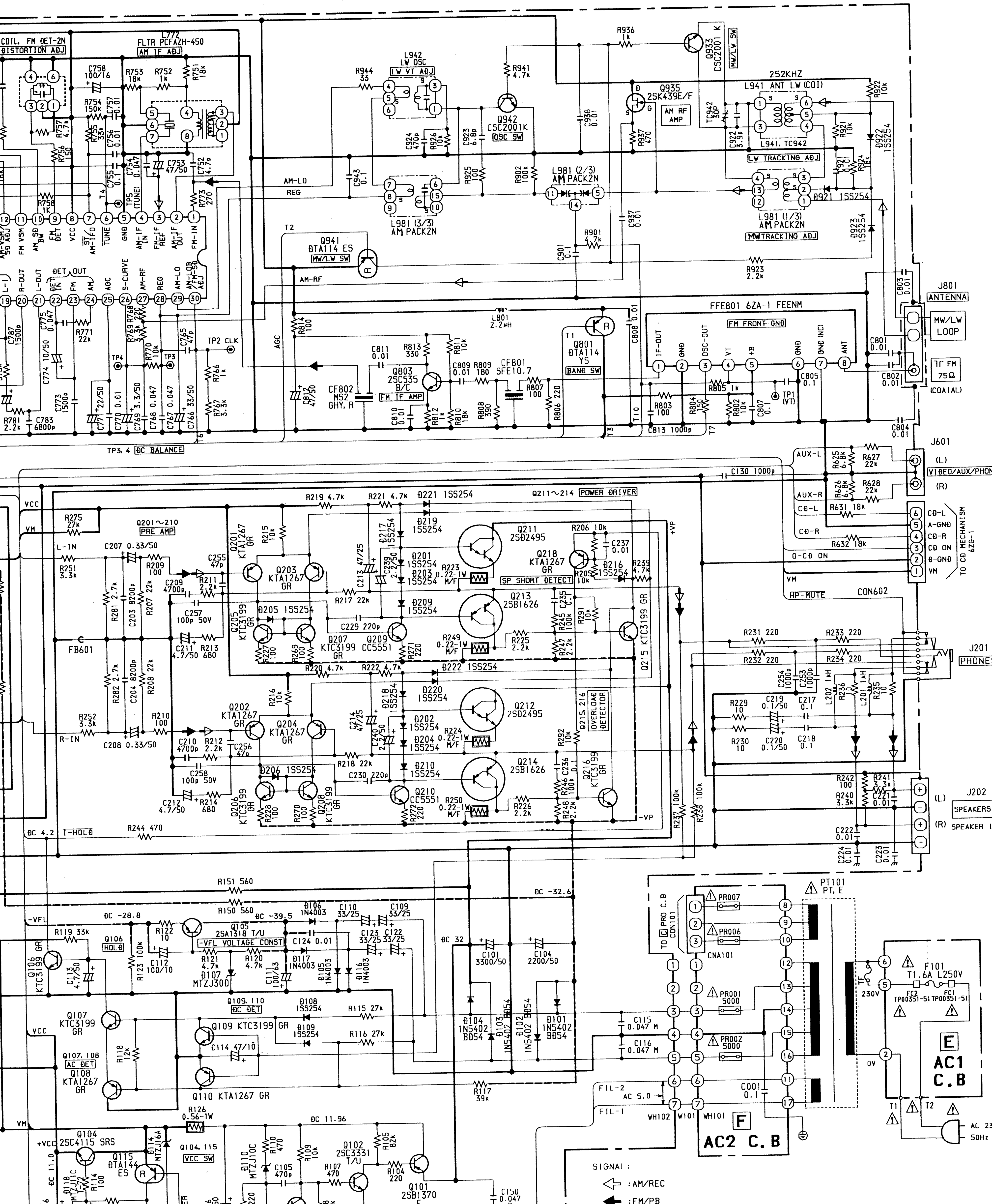

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
A MAIN C.B
FROM DECK2
CON301 3 1
TO PIN301
FROM DECK1
CON351 8 7 6 5 4 3 2 1
TO PIN351
J801
ANTENNA
MW/LW LOOP
FM75Ω
(COAXIAL)
J601
VIDEO/
AUX/PHONO IN
R
L
TO CD MECHANISM 6ZG-1
FC101
TO CON602
FROM F AC2 C.B
WH101
WHT
W101
J202
SPEAKERS
SPEAKER IMP:6Ω
TO B FRONT C.B
CON101
J201
PHONES
IC751
IC701
IC601
IC401
IC301
CON601
CON602
PIN301
PIN351

SCHEMATIC DIAGRAM – 1 (MAIN)

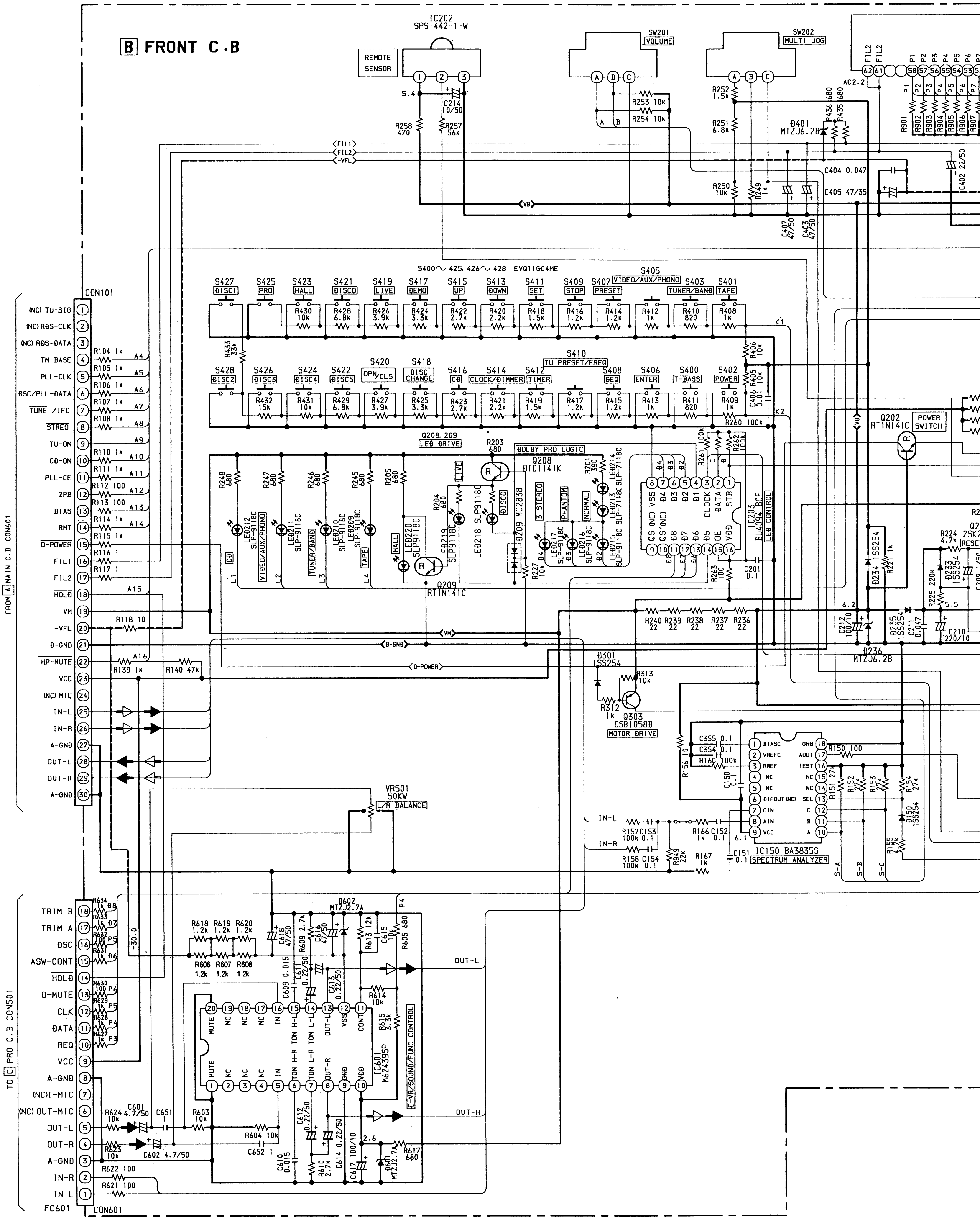

CON601
(NC) TU SIG ①
(NC) RDS CLK ②
(NC) RDS DATA ③
TM BASE ④
PLL/CD CLK ⑤
DATA ⑥
TUNE/IFC ⑦
STEREO ⑧
D-TU-ON ⑨
D-CD ON ⑩
PLLCE ⑪
D-2PB ⑫
D-BIAS ⑬
D-RMT ⑭
D-POWER ⑮
FIL-1 ⑯
FIL-2 ⑰
T-HOLD ⑱
VM ⑲
-VFL ⑳
D-GND ㉑
HP-MUTE ㉒
VCC ㉓
MIC ㉔
(NC) RECOUT-L ㉕
(NC) RECOUT-R ㉖
A-GND ㉗
IN-L ㉘
IN-R ㉙
A-GND ㉚
TO B FRONT C.B CON101
TUNER-PLL
IC701 LC72131D
PLL
X701 4.5MHz XTL
D701 MTZJ5.6A
POWER CONTROL
Q701 2SC4115 SRS
L701 2.2mH
A MAIN C.B
IC751 LA1837NL
DECODER
D752 1SS254
D751 1SS254
BEAT
CD-L
AUX-L
D602 MTZJ2.7A
E-VR/SOUND/FUNC CONTROL
Q301~304
PB SW
IC301 (1/2) NJM4558 LD
IC301 PB AMP
IC301 (2/2) NJM4558 LD
Q302 2SJ460
Q301 2SJ460
Q304 2SK254
Q303 2SK254
Q305~310
REC/PB SW
Q305 2SA1318
Q306 DTC144 ES
Q307 2SA1318
D325 1SS254
Q308 2SA1318
Q309 KTA1267 GR
Q310 KTA1267 GR
DECK 2
CON301
L CH
R CH
AZIMUTH ADJ
FB303
FB301
IC401 (1/2) NJM4558LD
REC AMP
IC401 (2/2) NJM4558LD
Q442 KTA1267 GR
Q443 KTA1267 GR
Q442, 443
RMT SW
D401 1SS254
D-RMT
DC 4.9
DC 7.0
DECK 1
CON351
L CH
R CH
EH
AZIMUTH ADJ
SFR451, 452
REC/PB FREQUENCY RESPONSE ADJ
SFR452 30K
SFR451 30K
L451 BIAS 85K
Q453 2SC3331
Q454 2SC3331 T/U
Q453, 454
BIAS OSC
Q451 2SC3331 T/U
D-BIAS
BIAS OSC SW
Q455 KTC3199 GR
TP8
GND
TP9
VCC
VM
BEAT

Aiwa 3113

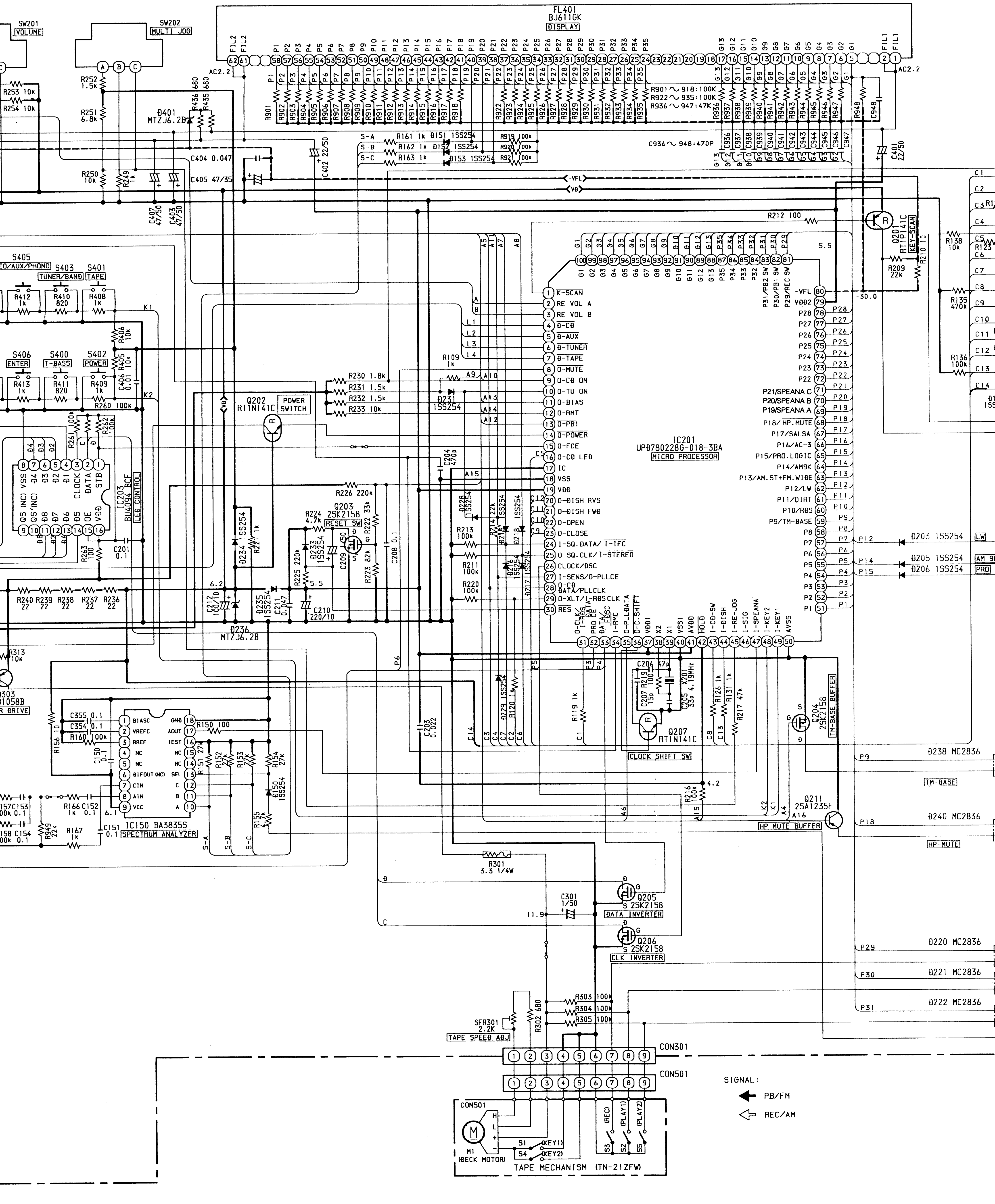

A MAIN C.B
L771 COIL, FM DET-2N
DC BALANCE/MONO DISTORTION ADJ
L772 FLTR PCFAZH-450
AM IF ADJ
IC751 LA1837NL DECODER
BUFFERS
DET OUT
TP2 CLK
TP3, 4 DC BALANCE
L942 LW OSC
LW VT ADJ
Q942 CSC2001K
OSC SW
Q935 2SK439E/F
AM RF AMP
L981 (2/3) AM PACK2N
L981 (3/3) AM PACK2N
Q941 DTA114 ES
MW/LW SW
AM-LO
REG
AM-RF
AGC
L801 2.2μH
Q803 2SC535 B/C
FM IF AMP
CF802 MS2 GHY, R
CF801 SFE10.7
Q801 DTA114 YS
BAND SW
IF-OUT
GND
OSC-OUT
CD-L
AUX-L
D602 MTZJ2.7A
E-VR/SOUND/FUNC CONTROL
IC601 M62439SP
Q201~210 PRE AMP
Q211~214 POWER DRIVER
Q211 2SD2495
Q212 2SD2495
Q213 2SB1626
Q214 2SB1626
Q218 KTA1267 GR
SP SHORT DETECT
Q215, 216 OVERLOAD DETECTOR
L-IN
R-IN
FB601
FB301
I-HOLD
TP8
GND
TP9
REC AMP
BIAS OSC SW
Q451 2SC3331 T/U
Q105 2SA1318 T/U
-VFL VOLTAGE CONST
Q106 HOLD
Q109, 110 DC DET
Q107, 108 AC DET
Q104 2SC4115 SRS
Q115 DTA144 ES
Q104, 115 VCC SW
Q101 2SB1370 E
Q101~103 +VM VOLTAGE CONST
C101 3300/50
C104 2200/50
D104 1N5402 BB54
D101 1N5402 BB54
TO C PRO C.B CON101
FIL-2
AC 5.0
FIL-1
WH102
W101
SIGNAL:
:AM/REC
:FM/PB
D-POWER

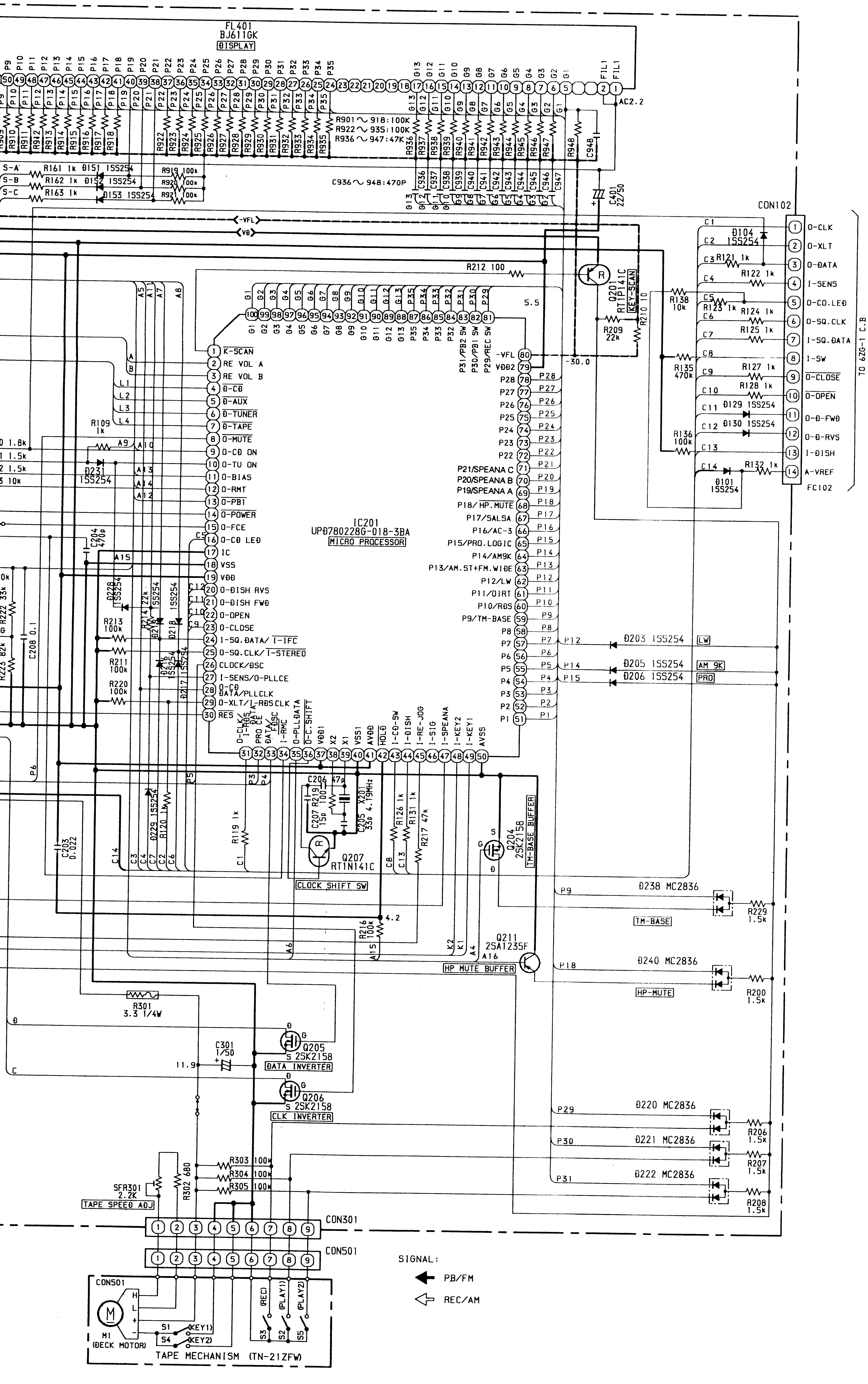

COIL, FM DET-2N
DISTORTION ADJ
L772
FLTR PCFAZH-450
AM IF ADJ
L942
LW OSC
LW VT ADJ
R944 33
R941 4.7k
Q942
CSC2001K
OSC SW
R936 1k
Q933
CSC2001 K
MW/LW SW
Q935
2SK439E/F
AM RF AMP
252KHZ
L941 ANT LW (COI)
L941, TC942
LW TRACKING ADJ
L981 (2/3)
AM PACK2N
L981 (3/3)
AM PACK2N
L981 (1/3)
AM PACK2N
MW TRACKING ADJ
D921 1SS254
D922 1SS254
D923 1SS254
R923 2.2k
AM-LO
REG
AM-RF
AGC
Q941
DTA114 ES
MW/LW SW
T2
L801 2.2μH
Q801
DTA114 YS
BAND SW
Q803
2SC535 B/C
FM IF AMP
CF801 SFE10.7
CF802 MS2 GHY, R
FFE801 6ZA-1 FEENM
FM FRONT END
IF-OUT
GND
OSC-OUT
VT
+B
GND (NC)
ANT
TP1 (VT)
C813 1000p
J801
ANTENNA
MW/LW LOOP
FM 75Ω
(COAIAL)
TP2 CLK
TP3, 4 DC BALANCE
R-OUT
L-OUT
DET OUT
S-CURVE
AM-LO
AM-IF OUT
FM-IN
ST/AM-IFO
TUNE
J601
(L)
VIDEO/AUX/PHONO IN
(R)
AUX-L
AUX-R
CD-L
CD-R
A-GND
CD ON
D-GND
VM
TO CD MECHANISM 6ZG-1
O-CD ON
HP-MUTE
CON602
C130 1000p
VCC
VM
L-IN
R-IN
FB601
Q201~210
PRE AMP
Q211~214 POWER DRIVER
Q201 KTA1267 GR
Q202 KTA1267 GR
Q203 KTA1267 GR
Q204 KTA1267 GR
Q205 KTC3199 GR
Q206 KTC3199 GR
Q207 KTC3199 GR
Q208 KTC3199 GR
Q209 CC5551
Q210 CC5551
Q211 2SD2495
Q212 2SD2495
Q213 2SB1626
Q214 2SB1626
Q215 KTC3199 GR
Q216 KTC3199 GR
Q218 KTA1267 GR
Q215, 216 OVERLOAD DETECTOR
SP SHORT DETECT
D221 1SS254
D222 1SS254
+VP
-VP
J201
PHONES
J202
SPEAKERS
SPEAKER IMP: 6Ω
DC 4.2
T-HOLD
R244 470
R151 560
R150 560
DC -32.6
DC -28.8
DC -39.5
DC 32
Q105
2SA1318 T/U
-VFL VOLTAGE CONST
-VFL
Q106
HOLD
Q106 KTC3199 GR
D107 MTZJ30B
Q107 KTC3199 GR
Q107, 108
AC DET
Q108 KTA1267 GR
Q109, 110
DC DET
Q109 KTC3199 GR
Q110 KTA1267 GR
C101 3300/50
C104 2200/50
D101 1N5402 BD54
D102 1N5402 BD54
D103 1N5402 BD54
D104 1N5402 BD54
R117 39k
R126 0.56-1W
DC 11.96
DC 11.0
Q104
2SC4115 SRS
Q104, 115
VCC SW
Q115 DTA144 ES
D114 MTZJ16A
Q102 2SC3331 T/U
Q101 2SB1370 E
Q103 KTC3199 GR
Q101~103
+VM VOLTAGE CONST
D-POWER
C150 0.047 M
TO C PRO C.B CON101
CNA101
PR007
PR006
PR001 5000
PR002 5000
PT101
PT. E
C115 0.047 M
C116 0.047 M
C001 0.1
FIL-2
FIL-1
AC 5.0
WH102
W101
WH101
F
AC2 C.B
F101
T1.6A L250V
FC2 TP00351-51
FC1 TP00351-51
230V
0V
E
AC1 C.B
T1
T2
AC 230V 50Hz
SIGNAL:
:AM/REC
:FM/PB

SCHEMATIC DIAGRAM – 2 (FRONT)

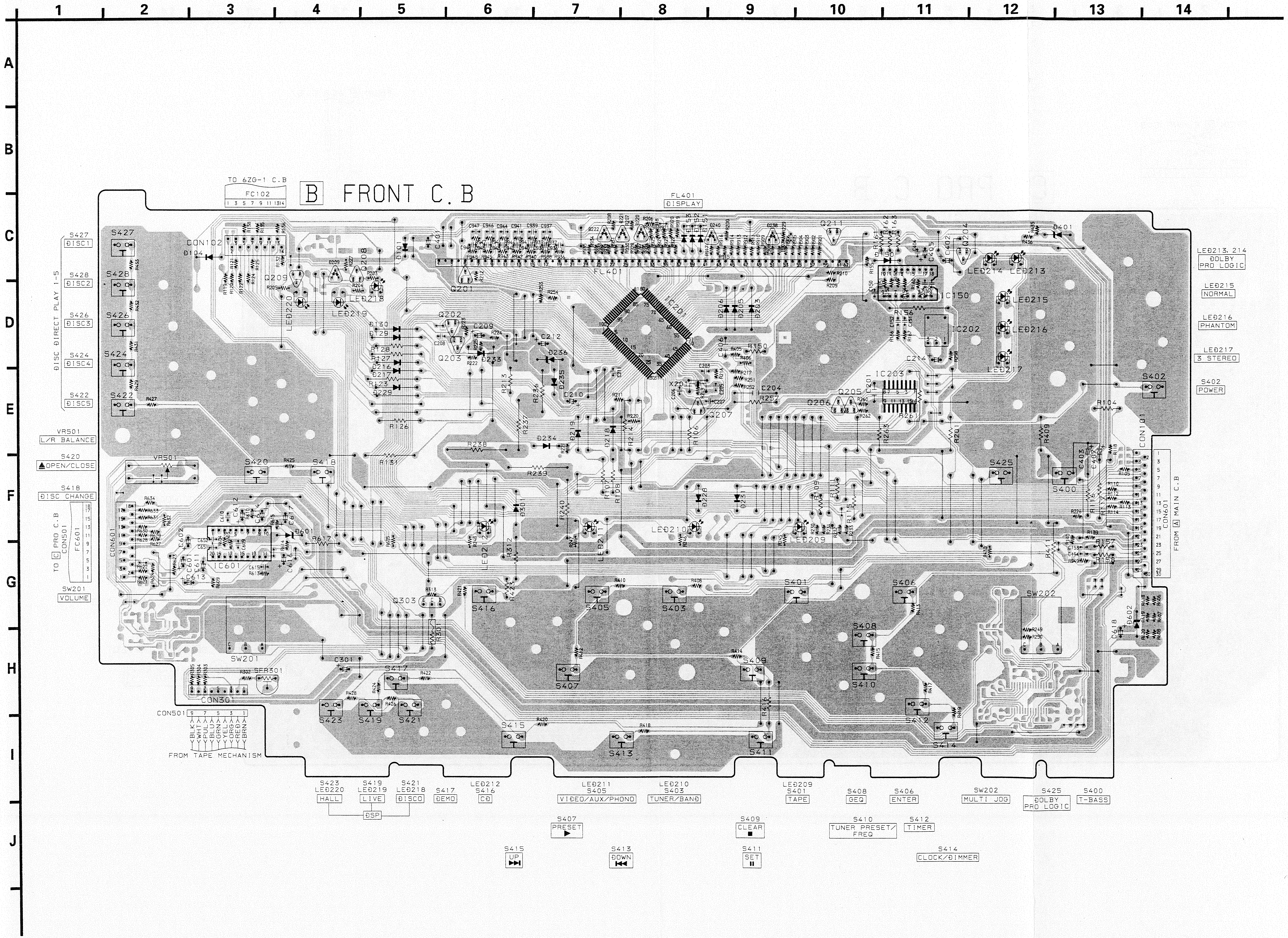


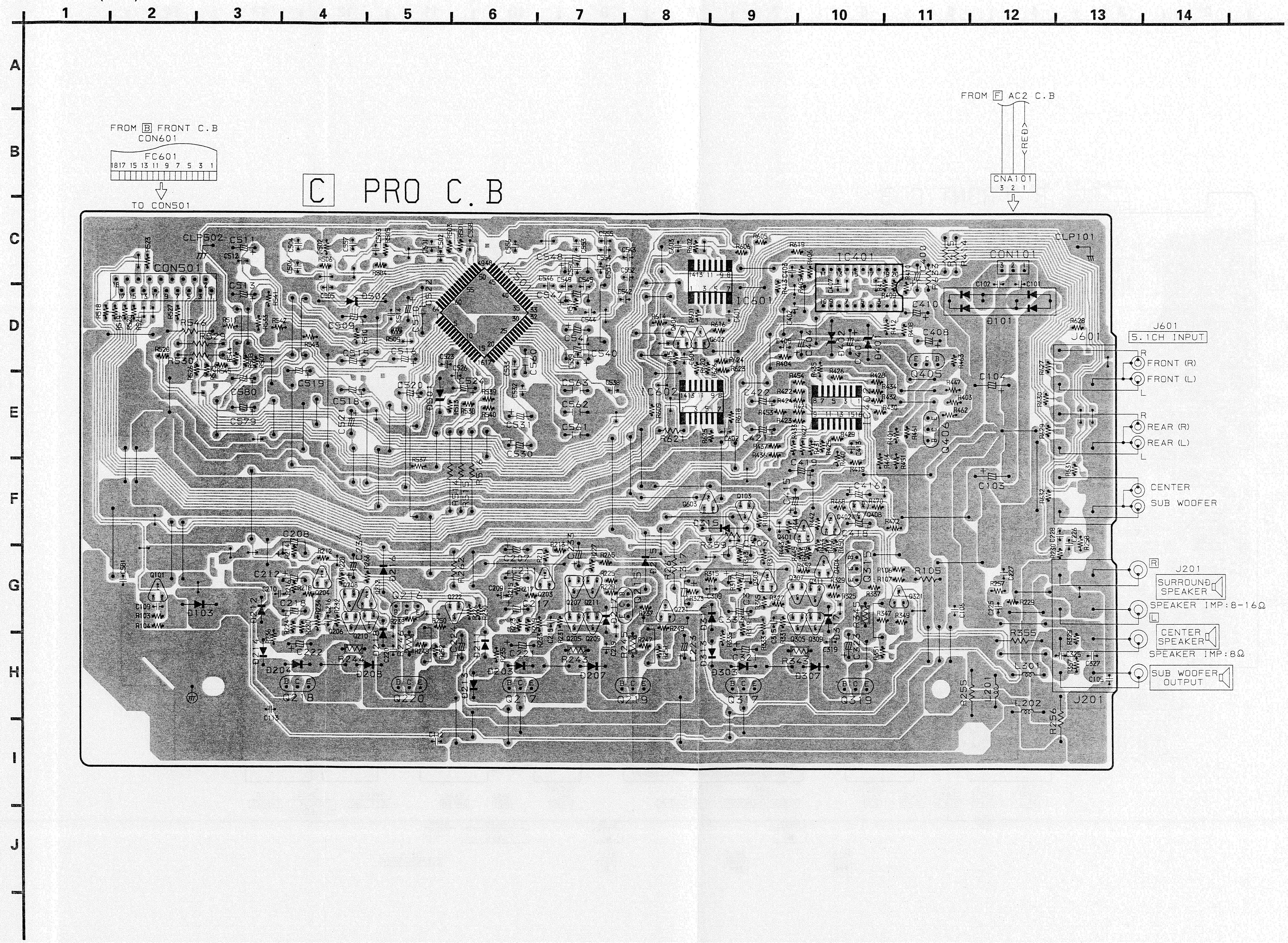
B FRONT C.B
IC202 SPS-442-1-W
REMOTE SENSOR
SW201 VOLUME
SW202 MULTI JOG
CON101
FROM A MAIN C.B CON601
(NC) TU-SIG
(NC) RDS-CLK
(NC) RDS-DATA
TM-BASE
PLL-CLK
DSC/PLL-DATA
TUNE /IFC
STREO
TU-ON
CD-ON
PLL-CE
2PB
BIAS
RMT
D-POWER
FIL1
FIL2
HOLD
VM
-VFL
D-GND
HP-MUTE
VCC
(NC) MIC
IN-L
IN-R
A-GND
OUT-L
OUT-R
A-GND
S400～425, 426～428 EVQ11G04ME
S427 DISC1
S425 PRO
S423 HALL
S421 DISCO
S419 LIVE
S417 DEMO
S415 UP
S413 DOWN
S411 SET
S409 STOP
S407 PRESET
S405 VIDEO/AUX/PHONO
S403 TUNER/BAND
S401 TAPE
S428 DISC2
S426 DISC3
S424 DISC4
S422 DISC5
S420 OPN/CLS
S418 DISC CHANGE
S416 CD
S414 CLOCK/DIMMER
S412 TIMER
S410 TU PRESET/FREQ
S408 GEQ
S406 ENTER
S400 T-BASS
S402 POWER
Q208, 209 LED DRIVE
Q208 DTC114TK
Q209 RT1N141C
DOLBY PRO LOGIC
LED212 SLP-9118C VIDEO/AUX/PHONO
LED211 SLP-9118C TUNER/BAND
LED210 SLP-9118C
LED209 SLP-9118C TAPE
LED220 SLP9118C HALL
LED219 SLP9118C LIVE
LED218 SLP9118C DISCO
D209 MC2838
LED217 SLP-9118C 3 STEREO
LED216 SLP-9118C PHANTOM
LED215 SLP-7118C NORMAL
LED214 SLP-7118C
LED213 SLP-7118C
IC203 BU4094 BCF LED CONTROL
Q202 RT1N141C POWER SWITCH
D301 1SS254
Q303 CSB1058B MOTOR DRIVE
IC150 BA3835S SPECTRUM ANALYZER
VR501 50KW L/R BALANCE
D602 MTZJ2.7A
IC601 M62439SP E-VR/SOUND/FUNC CONTROL
OUT-L
OUT-R
TO C PRO C.B CON501
TRIM B
TRIM A
DSC
ASW-CONT
HOLD
O-MUTE
CLK
DATA
REQ
VCC
A-GND
(NC)I-MIC
(NC) OUT-MIC
OUT-L
OUT-R
A-GND
IN-R
IN-L
FC601
CON601
D236 MTZJ6.2B
D401 MTZJ6.2B


FL401
BJ611GK
DISPLAY
SW201
VOLUME
SW202
MULTI JOG
R252 1.5k
R253 10k
R254 10k
R251 6.8k
D401 MTZJ6.2B
R436 680
R435 680
AC2.2
C404 0.047
C405 47/35
R250 10k
R249 1k
C407 47/50
C403 47/50
C402 22/50
S-A
S-B
S-C
R161 1k
R162 1k
R163 1k
D151 1SS254
D152 1SS254
D153 1SS254
R919 100k
R920 100k
R921 100k
R901～918:100K
R922～935:100K
R936～947:47K
C936～948:470P
C948
C401 22/50
-VFL
VD
R212 100
Q201 RT1P141C
KEY-SCAN
R138 10k
R209 22k
R210 10
R135 470k
R136 100k
-30.0
5.5
S405
CD/AUX/PHONO
S403
TUNER/BAND
S401
TAPE
R412 1k
R410 820
R408 1k
K1
R406 10k
R405 10k
C406 0.01
S406
ENTER
S400
T-BASS
S402
POWER
R413 1k
R411 820
R409 1k
K2
R260 100k
R261 100k
R262 100k
IC203
BU4094 BCF
LED CONTROL
QS (NC) VSS D4 D3 D2 D1 CLOCK DATA STB
QS' (NC) D8 D7 D6 D5 OE VDD
R263 100
C201 0.1
R240 R239 R238 R237 R236
22 22 22 22 22
Q202 RT1N141C
POWER SWITCH
R230 1.8k
R231 1.5k
R232 1.5k
R233 10k
R109 1k
D231 1SS254
C204 470p
R226 220k
R224 4.7k
Q203 2SK2158
RESET SW
R222 33k
D234 1SS254
R221 1k
D233 1SS254
C209 1/50
R223 82k
C208 0.1
R225 220k
C210 220/10
5.5
6.2
C212 100/10
D235 1SS254
C211 0.047
D236 MTZJ6.2B
D228 1SS254
R213 100k
R211 100k
R220 100k
R214 22k
D214 1SS254
D218 1SS254
D216 1SS254
D215 1SS254
D217 1SS254
IC201
UPD780228G-018-3BA
MICRO PROCESSOR
1 K-SCAN
2 RE VOL A
3 RE VOL B
4 D-CD
5 D-AUX
6 D-TUNER
7 D-TAPE
8 O-MUTE
9 O-CD ON
10 O-TU ON
11 O-BIAS
12 O-RMT
13 O-PBI
14 O-POWER
15 O-FCE
16 O-CD LED
17 IC
18 VSS
19 VDD
20 O-DISH RVS
21 O-DISH FWD
22 O-OPEN
23 O-CLOSE
24 I-SQ.DATA/I-IFC
25 O-SQ.CLK/I-STEREO
26 CLOCK/OSC
27 I-SENS/O-PLLCE
28 O-CD DATA/PLLCLK
29 O-XLT/I-RDS CLK
30 RES
31 O-CLK I-RDS
32 PRO CE
33 DATA
34 I-FOSC
35 I-RMC
36 O-PLLDATA
37 O-C.SHIFT
38 VDD1
39 X2
40 X1
41 VSS1
42 AVDD
43 HOLD
44 I-CD-SW
45 I-DISH
46 I-RE-JOG
47 I-SIG
48 I-SPEANA
49 I-KEY2
50 I-KEY1
AVSS
51 P1
52 P2
53 P3
54 P4
55 P5
56 P6
57 P7
58 P8
59 P9/TM-BASE
60 P10/RDS
61 P11/OIRT
62 P12/LW
63 P13/AM.ST+FM.WIDE
64 P14/AM9K
65 P15/PRO.LOGIC
66 P16/AC-3
67 P17/SALSA
68 P18/HP.MUTE
69 P19/SPEANA A
70 P20/SPEANA B
71 P21/SPEANA C
72 P22
73 P23
74 P24
75 P25
76 P26
77 P27
78 P28
79 VDD2
80 -VFL
81 P29/REC SW
82 P30/PB1 SW
83 P31/PB2 SW
84 P32
85 P33
86 P34
87 P35
88 G13
89 G12
90 G11
91 G10
92 G9
93 G8
94 G7
95 G6
96 G5
97 G4
98 G3
99 G2
100 G1
D203 1SS254
LW
D205 1SS254
AM 9K
D206 1SS254
PRO
C206 47p
R219 100
C207 15p
X201 4.19MHz
C205 33p
R126 1k
R131 1k
R217 47k
R119 1k
D229 1SS254
R120 1k
C203 0.022
Q207 RT1N141C
CLOCK SHIFT SW
Q204 2SK2158
TM-BASE BUFFER
D238 MC2836
TM-BASE
4.2
R216 100k
Q211 2SA1235F
HP MUTE BUFFER
D240 MC2836
HP-MUTE
R313 10k
Q303 2SD1058B
MOTOR DRIVE
C355 0.1
C354 0.1
R160 100k
R156 10
C150 0.1
IC150 BA3835S
SPECTRUM ANALYZER
1 BIASC
2 VREFC
3 RREF
4 NC
5 NC
6 BIFOUT(NC)
7 CIN
8 AIN
9 VCC
18 GND
17 AOUT
16 TEST
15 NC
14 NC
13 SEL
12 C
11 B
10 A
R150 100
R151 27k
R152 27k
R153 27k
R154 27k
D150 1SS254
R155 4.7k
C157 C153
100k 0.1
R166 1k
C152 0.1
R949 22k
C158 C154
100k 0.1
R167 1k
C151 0.1
6.1
R301 3.3 1/4W
C301 1/50
11.9
Q205 2SK2158
DATA INVERTER
Q206 2SK2158
CLK INVERTER
D220 MC2836
D221 MC2836
D222 MC2836
P29
P30
P31
R303 100k
R304 100k
R305 100k
SFR301 2.2K
TAPE SPEED ADJ
R302 680
CON301
CON501
SIGNAL:
PB/FM
REC/AM
M1
DECK MOTOR
H
L
+
-
S1 (KEY1)
S4 (KEY2)
S3 (REC)
S2 (PLAY1)
S5 (PLAY2)
TAPE MECHANISM (TN-21ZFW)

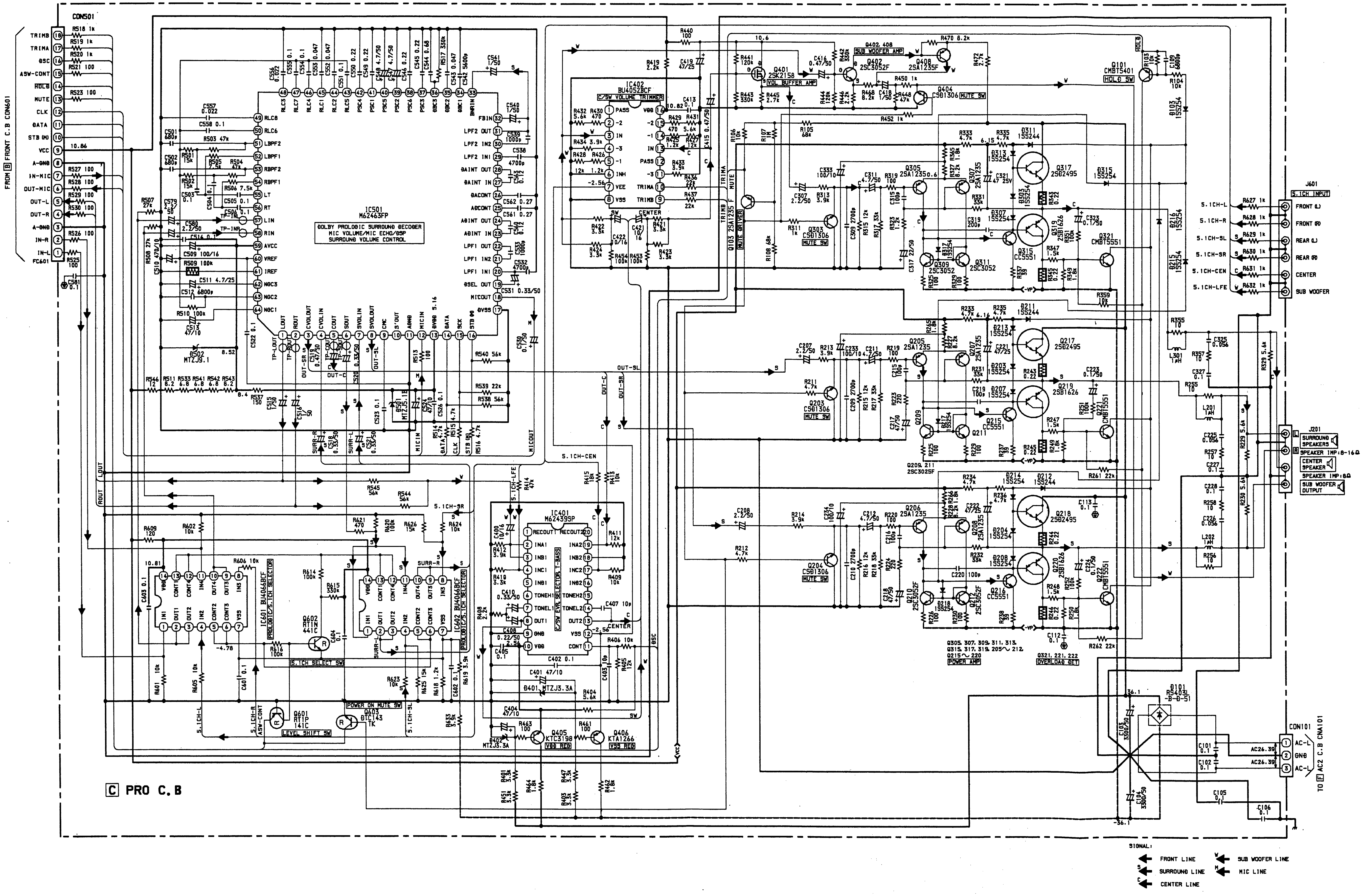

FL401
BJ611GK
DISPLAY
R901～918:100K
R922～935:100K
R936～947:47K
C936～948:470P
AC2.2
C401 22/50
CON102
0-CLK
0-XLT
0-DATA
I-SENS
0-CO.LED
0-SQ.CLK
I-SQ.DATA
I-SW
0-CLOSE
0-OPEN
0-D-FWD
0-D-RVS
I-DISH
A-VREF
FC102
TO 6ZG-1 C.B
D104 1SS254
R121 1k
R122 1k
R123 1k
R124 1k
R125 1k
R127 1k
R128 1k
D129 1SS254
D130 1SS254
R132 1k
D101 1SS254
R138 10k
R135 470k
R136 100k
Q201 RT1P141C
KEY-SCAN
R209 22k
R210 10
R212 100
5.5
-30.0
-VFL
V0
IC201
UPD780228G-018-3BA
MICRO PROCESSOR
K-SCAN
RE VOL A
RE VOL B
0-CD
0-AUX
0-TUNER
0-TAPE
0-MUTE
0-CD ON
0-TU ON
0-BIAS
0-RMT
0-PBI
0-POWER
0-FCE
0-CD LED
IC
VSS
VDD
0-DISH RVS
0-DISH FWD
0-OPEN
0-CLOSE
I-SQ.DATA/I-IFC
0-SQ.CLK/I-STEREO
CLOCK/OSC
I-SENS/0-PLLCE
0-CD DATA/PLLCLK
0-XLT/I-RDS CLK
RES
P31/PB2 SW
P30/PB1 SW
P29/REC SW
VDD2
P21/SPEANA C
P20/SPEANA B
P19/SPEANA A
P18/HP.MUTE
P17/SALSA
P16/AC-3
P15/PRO.LOGIC
P14/AM9K
P13/AM.ST+FM.WIDE
P12/LW
P11/DIRT
P10/RDS
P9/TM-BASE
D203 1SS254
LW
D205 1SS254
AM 9K
D206 1SS254
PRO
R109 1k
D231 1SS254
C204 470p
C208 0.1
R213 100k
R211 100k
R220 100k
R214 22k
D218 1SS254
D217 1SS254
D229 1SS254
R120 1k
R119 1k
C203 0.022
C206 47p
R219 100
C207 15p
C205 33p
X201 4.19MHz
R126 1k
R131 1k
R217 47k
Q207 RT1N141C
CLOCK SHIFT SW
Q204 2SK2158
TM-BASE BUFFER
D238 MC2836
TM-BASE
R229 1.5k
4.2
R216 100k
Q211 2SA1235F
HP MUTE BUFFER
D240 MC2836
HP-MUTE
R200 1.5k
R301 3.3 1/4W
C301 1/50
11.9
Q205 2SK2158
DATA INVERTER
Q206 2SK2158
CLK INVERTER
D220 MC2836
R206 1.5k
D221 MC2836
R207 1.5k
D222 MC2836
R208 1.5k
R303 100k
R304 100k
R305 100k
SFR301 2.2K
TAPE SPEED ADJ
R302 680
CON301
CON501
M1 (DECK MOTOR)
S1 (KEY1)
S4 (KEY2)
(REC)
(PLAY1)
(PLAY2)
S3
S2
S5
TAPE MECHANISM (TN-21ZFW)
SIGNAL:
PB/FM
REC/AM

WIRING – 2 (FRONT)

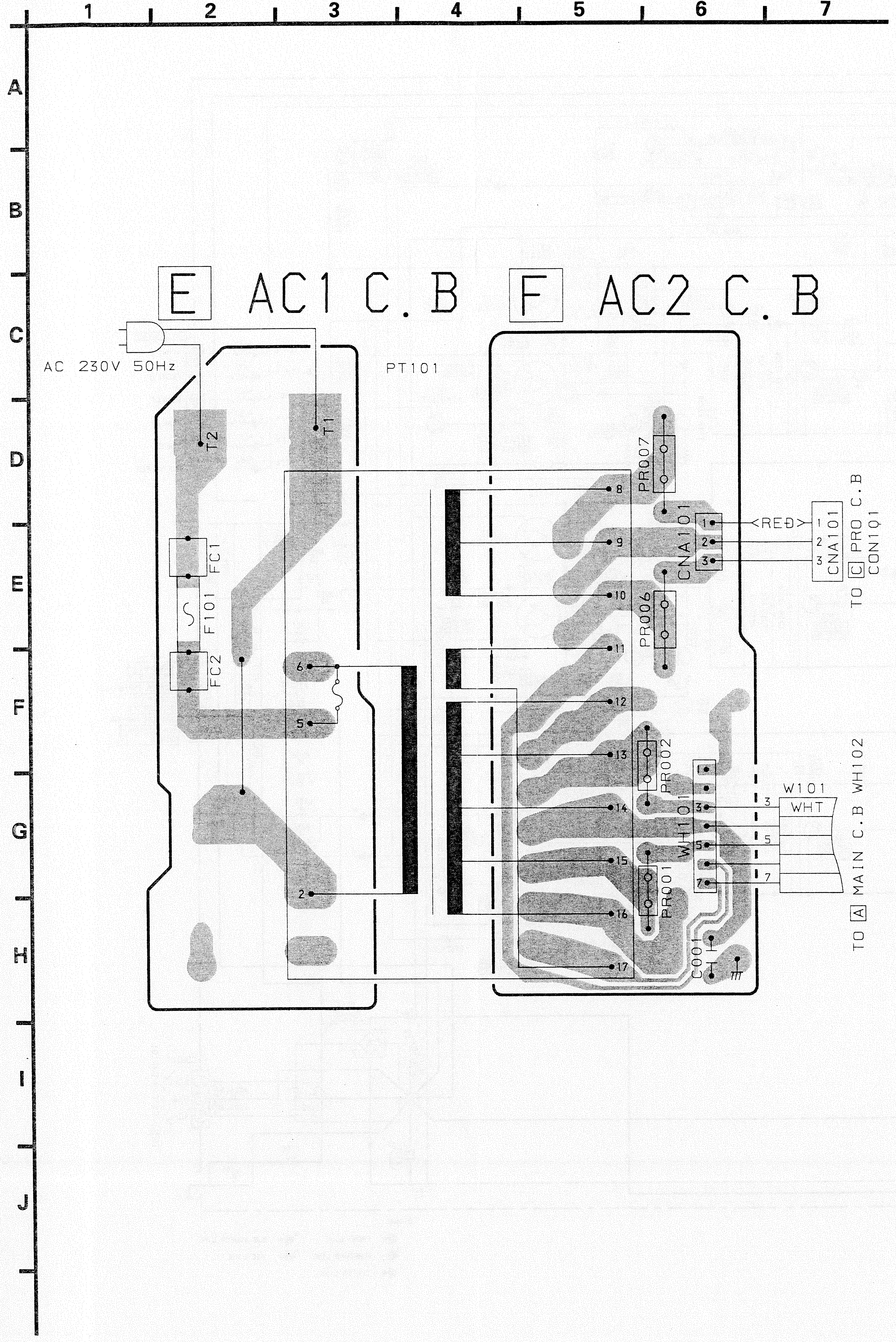

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
B FRONT C.B
TO 6ZG-1 C.B
FC102
1 3 5 7 9 11 13 14
FL401
DISPLAY
S427
DISC1
S428
DISC2
S426
DISC3
S424
DISC4
S422
DISC5
DISC DIRECT PLAY 1-5
VR501
L/R BALANCE
S420
▲OPEN/CLOSE
S418
DISC CHANGE
TO G PRO C.B
CON501
FC601
SW201
VOLUME
CON501
FROM TAPE MECHANISM
BLK WHT PUL BLU GRN YEL ORG RED BRN
LED213, 214
DOLBY
PRO LOGIC
LED215
NORMAL
LED216
PHANTOM
LED217
3 STEREO
S402
POWER
CON601
FROM A MAIN C.B
S423
LED220
HALL
S419
LED219
LIVE
S421
LED218
DISCO
DSP
S417
DEMO
LED212
S416
CD
LED211
S405
VIDEO/AUX/PHONO
LED210
S403
TUNER/BAND
LED209
S401
TAPE
S408
GEQ
S406
ENTER
SW202
MULTI JOG
S425
DOLBY
PRO LOGIC
S400
T-BASS
S407
PRESET
▶
S409
CLEAR
■
S410
TUNER PRESET/
FREQ
S412
TIMER
S415
UP
▶▶I
S413
DOWN
I◀◀
S411
SET
II
S414
CLOCK/DIMMER
CON102
CON101
CON301
IC201
IC601
IC150
IC202
IC203
Q201
Q202
Q203
Q205
Q206
Q207
Q208
Q209
Q211
Q303
SFR301
X201


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
FROM B FRONT C.B
CON601
FC601
18 17 15 13 11 9 7 5 3 1
TO CON501
C PRO C.B
FROM F AC2 C.B
<RED>
CNA101
3 2 1
CLP502
CON501
IC501
IC601
IC602
IC401
CON101
CLP101
D101
J601
5.1CH INPUT
R
FRONT (R)
FRONT (L)
L
R
REAR (R)
REAR (L)
L
CENTER
SUB WOOFER
R
J201
SURROUND SPEAKER
SPEAKER IMP: 8-16Ω
L
CENTER SPEAKER
SPEAKER IMP: 8Ω
SUB WOOFER OUTPUT
Q218
Q220
Q217
Q219
Q317
Q319
Q405
Q406
D103
L301
L201
L202
R255
R256
R355
R105

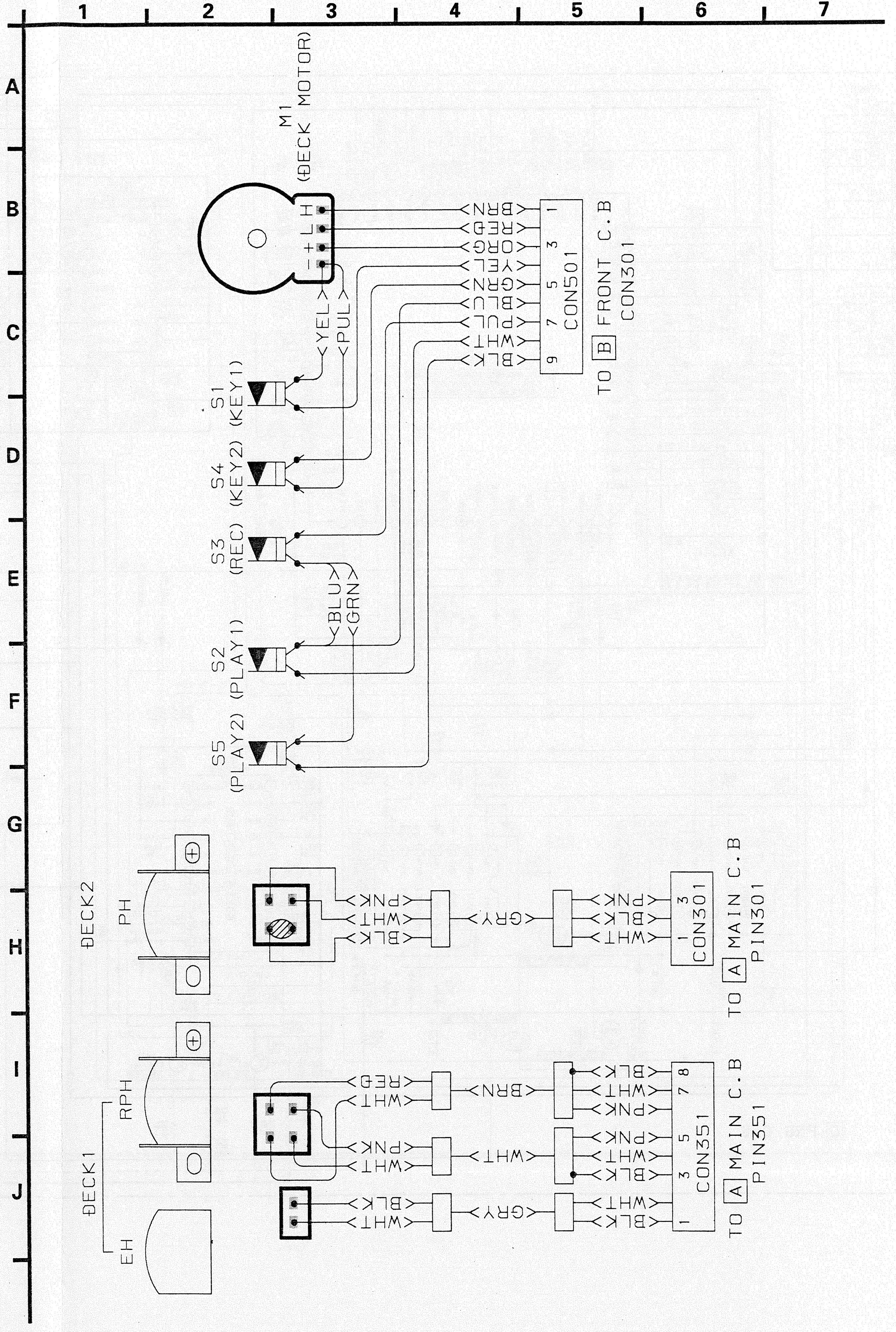
SCHEMATIC DIAGRAM – 3 (PRO)


CON501
FROM B FRONT C.B CON601
FC601
IC501
M62463FP
DOLBY PROLOGIC SURROUND DECODER
MIC VOLUME/MIC ECHO/DSP
SURROUND VOLUME CONTROL
IC402
BU4052BCF
C/SW VOLUME TRIMMER
IC401
M62439SP
C/SW EVR, SELECTOR, T-BASS
IC601 BU4066BCF
PROLOGIC/5.1CH SELECTOR
IC602 BU4066BCF
PROLOGIC/5.1CH SELECTOR
5.1CH SELECT SW
LEVEL SHIFT SW
POWER ON MUTE SW
VOL BUFFER AMP
SUB WOOFER AMP
MUTE SW
HOLD SW
MUTE DRIVER
POWER AMP
OVERLOAD DET
V88 REG
VSS REG
J601
5.1CH INPUT
FRONT (L)
FRONT (R)
REAR (L)
REAR (R)
CENTER
SUB WOOFER
J201
SURROUND SPEAKERS
SPEAKER IMP:8-16Ω
CENTER SPEAKER
SPEAKER IMP:8Ω
SUB WOOFER OUTPUT
CON101
TO F AC2 C.B CNA101
C PRO C.B
SIGNAL:
FRONT LINE
SURROUND LINE
CENTER LINE
SUB WOOFER LINE
MIC LINE

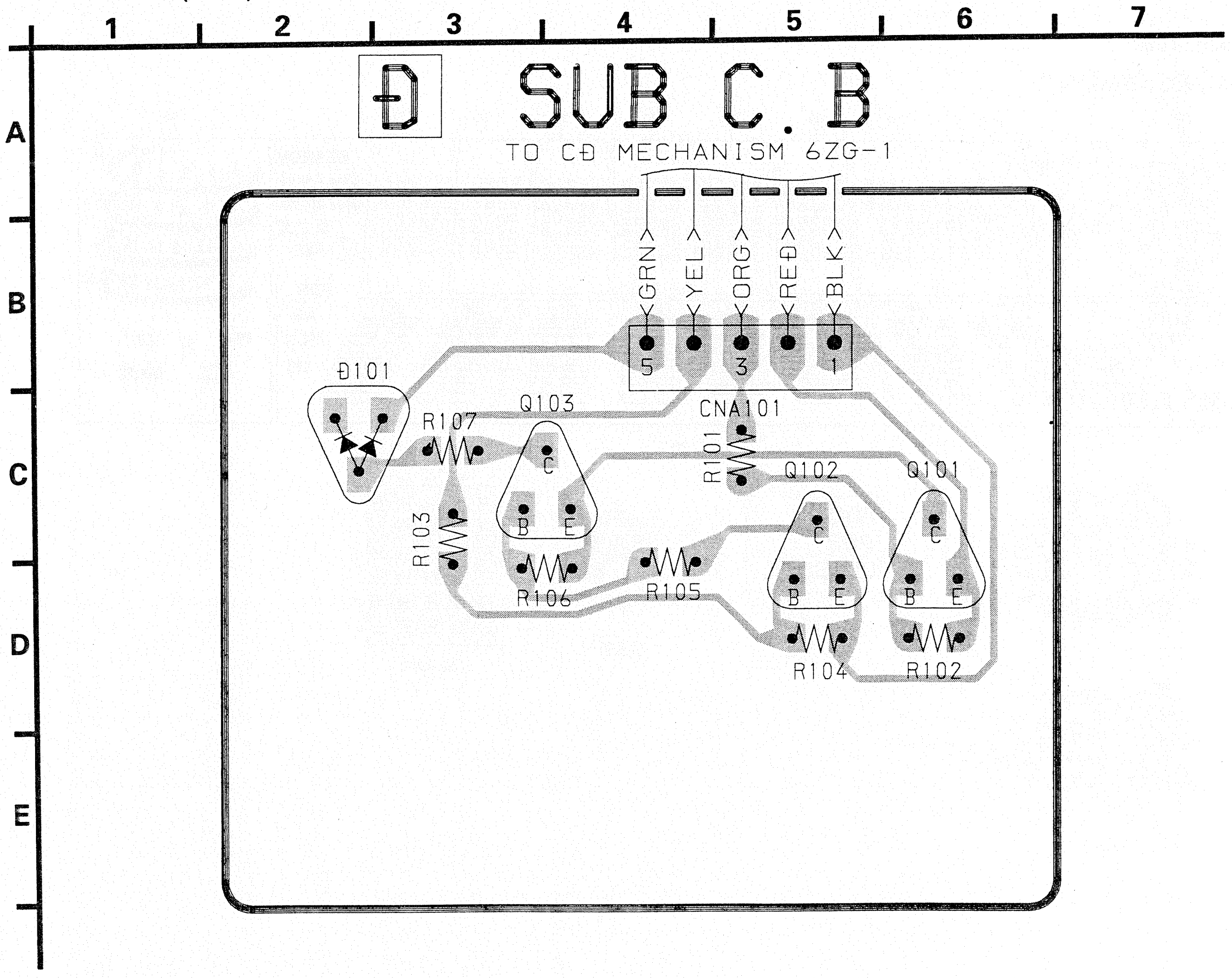
WIRING – 4 (AC1 / AC2)


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
E AC1 C.B
F AC2 C.B
AC 230V 50Hz
PT101
T1
T2
FC1
F101
FC2
6
5
2
8
9
10
11
12
13
14
15
16
17
PR007
PR006
PR002
PR001
CNA101
<RED>
1
2
3
CNA101
TO C PRO C.B CON101
W101
WHT
3
5
7
WH101
TO A MAIN C.B WH102
C001

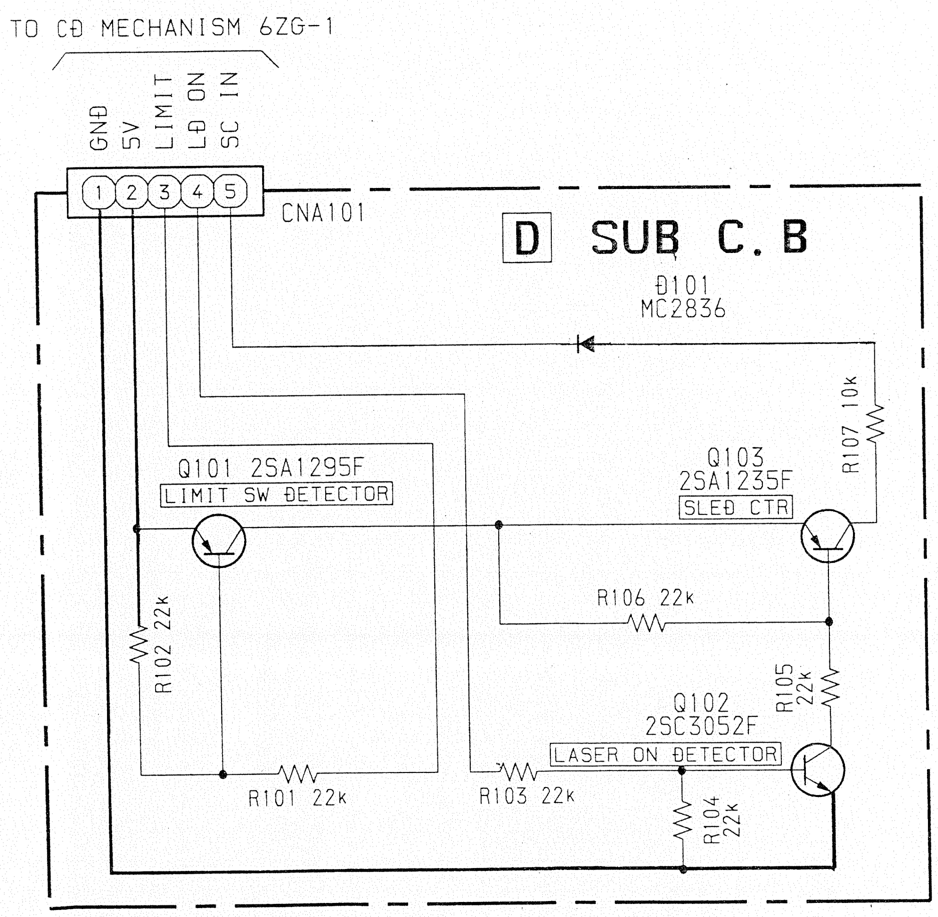
WIRING – 5 (DECK)


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
M1 (DECK MOTOR)
L H
+ –
<BRN>
<RED>
<ORG>
<YEL>
<GRN>
<BLU>
<PUL>
<WHT>
<BLK>
1
3
5
7
9
CON501
TO B FRONT C.B CON301
<YEL>
<PUL>
S1 (KEY1)
S4 (KEY2)
S3 (REC)
<BLU>
<GRN>
S2 (PLAY1)
S5 (PLAY2)
DECK2
PH
<PNK>
<WHT>
<BLK>
<GRY>
<PNK>
<BLK>
<WHT>
3
1
CON301
TO A MAIN C.B PIN301
DECK1
RPH
EH
<RED>
<WHT>
<BRN>
<BLK>
<WHT>
<PNK>
<PNK>
<WHT>
<WHT>
<PNK>
<WHT>
<BLK>
<BLK>
<WHT>
<GRY>
<WHT>
<BLK>
7 8
5
3
1
CON351
TO A MAIN C.B PIN351

WIRING – 6 (SUB)


1
2
3
4
5
6
7
A
B
C
D
E
D SUB C. B
TO CD MECHANISM 6ZG-1
GRN
YEL
ORG
RED
BLK
5
3
1
D101
R107
Q103
CNA101
R101
Q102
Q101
C
B
E
R103
R106
R105
R104
R102

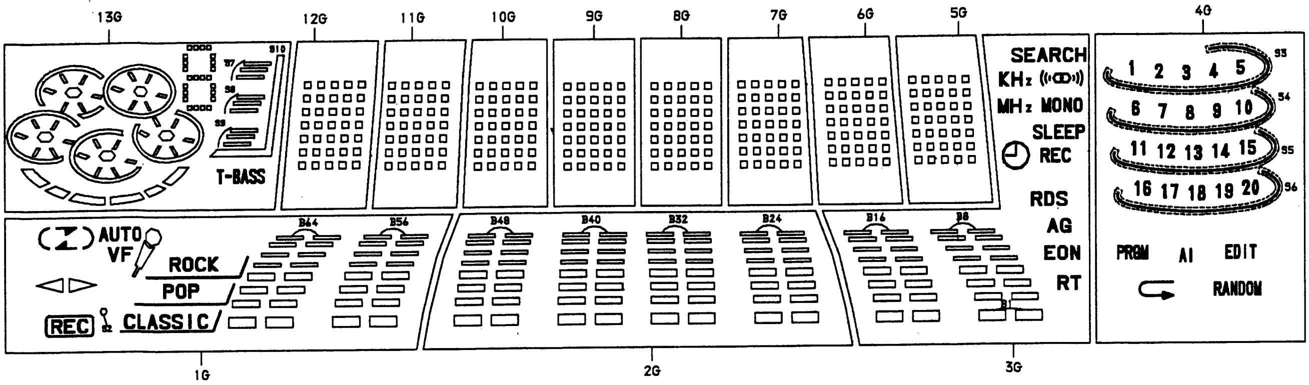
SCHEMATIC DIAGRAM – 4 (SUB)

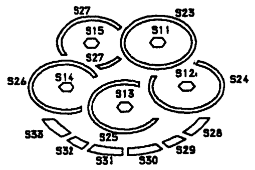

TO CD MECHANISM 6ZG-1
GND
5V
LIMIT
LD ON
SC IN
1
2
3
4
5
CNA101
D SUB C. B
D101
MC2836
R107 10k
Q103
2SA1235F
SLED CTR
Q101 2SA1295F
LIMIT SW DETECTOR
R106 22k
R105 22k
Q102
2SC3052F
LASER ON DETECTOR
R102 22k
R101 22k
R103 22k
R104 22k

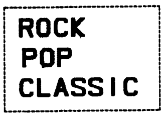
FL GRID ASSIGNMENT & ANODE CONNECTION

FL, BJ611GK

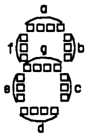
GRID ASSIGNMENT


13G
12G
11G
10G
9G
8G
7G
6G
5G
4G
S10
S7
S8
S9
T-BASS
SEARCH
KHz
MHz MONO
SLEEP
REC
RDS
AG
EON
RT
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
S3
S4
S5
S6
PRGM
AI
EDIT
RANDOM
AUTO
VF
ROCK
POP
CLASSIC
REC
B64
B56
B48
B40
B32
B24
B16
B8
B1
1G
2G
3G

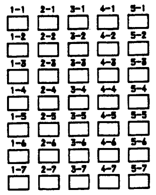

S27
S23
S15
S11
S27
S26
S14
S12
S24
S13
S33
S25
S28
S32
S31
S30
S29


ROCK
POP
CLASSIC
S1

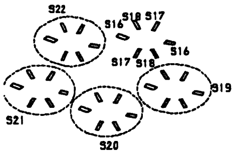
(1G)



(13G)


1-1
2-1
3-1
4-1
5-1
1-2
2-2
3-2
4-2
5-2
1-3
2-3
3-3
4-3
5-3
1-4
2-4
3-4
4-4
5-4
1-5
2-5
3-5
4-5
5-5
1-6
2-6
3-6
4-6
5-6
1-7
2-7
3-7
4-7
5-7

(5G-12G)


S22
S16
S18
S17
S16
S17
S18
S19
S21
S20

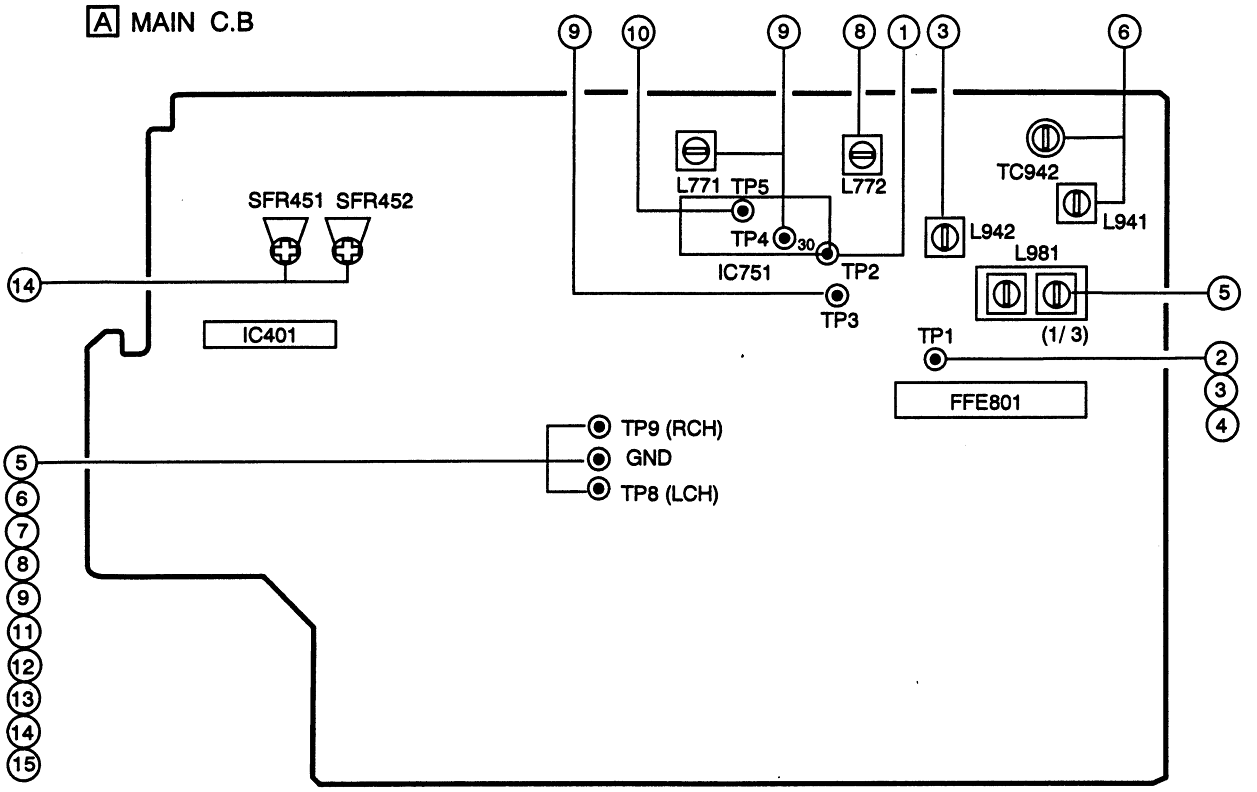
(13G)

ANODE CONNECTION

	1G	2G	3G	4G	5G~12G	13G
P1	B64	B48	B16	**1**	5-7	S33
P2	B56	B40	B8	**2**	4-7	S32
P3	B63	B32	B15	**3**	3-7	S31
P4	B55	B24	B7	**4**	2-7	S30
P5	B62	B47	B14	**5**	1-7	S29
P6	B54	B39	B6	**6**	5-6	S28
P7	B61	B31	B13	**7**	4-6	S27
P8	B53	B23	B5	**8**	3-6	S26
P9	B60	B46	B12	**9**	2-6	S25
P10	B52	B38	B4	**10**	1-6	S24
P11	B59	B30	B11	**11**	5-5	S23
P12	B51	B22	B3	**12**	4-5	S22
P13	B58	B45	B10	**13**	3-5	S21
P14	B50	B37	B2	**14**	2-5	S20
P15	B57	B29	B9	**15**	1-5	S19
P16	B49	B21	B1	**16**	5-4	S18
P17	(	B44	**KHz**	**17**	4-4	S17
P18	↗	B36	**MHz**	**18**	3-4	S16
P19	)	B28	**SEARCH**	**19**	2-4	S15
P20	◁	B20	**((·ꝏ·))**	**20**	1-4	S14
P21	▷	B43	**MONO**	S6	5-3	S13
P22	**REC**	B35	**SLEEP**	S5	4-3	S12
P23	S2	B27	🕘	S4	3-3	S11
P24	**AUTO**	B19	**REC**	S3	2-3	a
P25	**VF**	B42	**RDS**	**PRGM**	1-3	b
P26	🎤	B34	**AG**	**AI**	5-2	f
P27	S1	B26	**EON**	**EDIT**	4-2	g
P28	(ROCK) //	B18	**RT**	⟲	3-2	c
P29	(POP) //	B41	—	**RANDOM**	2-2	e
P30	(CLASSIC) //	B33	—	—	1-2	d
P31	—	B25	—	—	5-1	**T-BASS**
P32	—	B17	—	—	4-1	S10
P33	—	—	—	—	3-1	S9
P34	—	—	—	—	2-1	S8
P35	—	—	—	—	1-1	S7

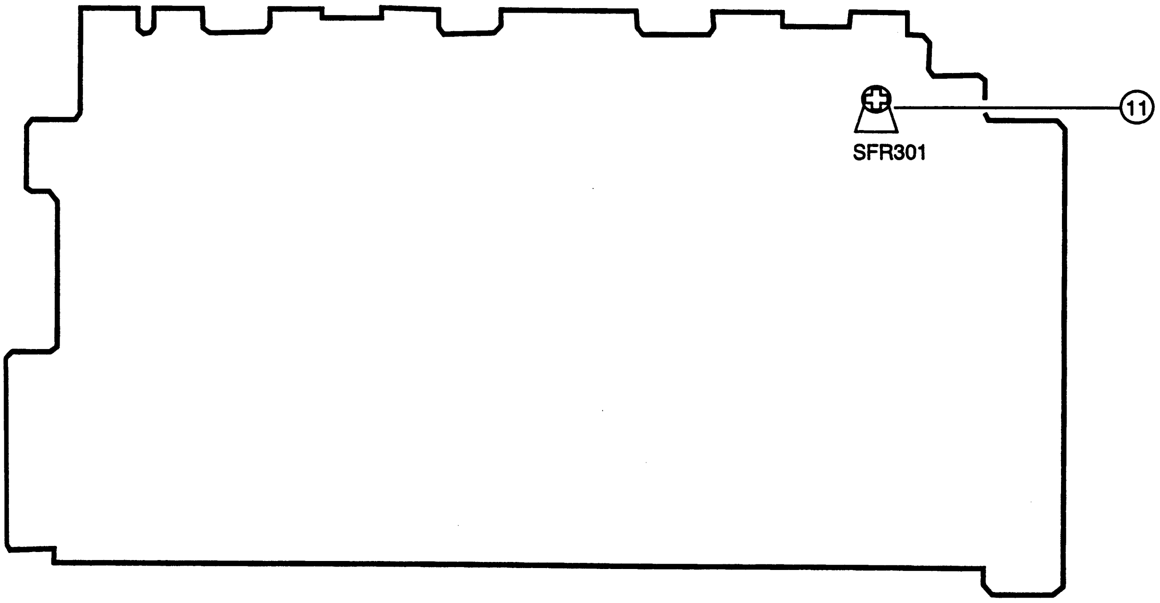
ADJUSTMENT <TUNER / DECK>

A MAIN C.B

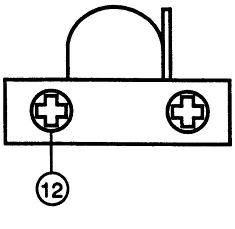


⑨
⑩
⑨
⑧
①
③
⑥
L771
TP5
L772
TC942
L941
L942
L981
SFR451
SFR452
TP4
30
IC751
TP2
TP3
⑤
(1/ 3)
TP1
②
③
④
IC401
FFE801
⑭
TP9 (RCH)
GND
TP8 (LCH)
⑤
⑥
⑦
⑧
⑨
⑪
⑫
⑬
⑭
⑮

B FRONT C.B



DECK–1 R / P / E, DECK–2 P HEAD



< TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2(CLK)
   Method : Set to AM 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. MW VT Check
   Settings : • Test point : TP1(VT)
   Method : Set to MW 1602kHz and MW 531kHz and check that the test point is less than 8.0V(1602kHz) and more than 0.6V(531kHz).

3. LW VT Adjustment
   Settings : • Test point : TP1(VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point is 1.3V ± 0.05V, then set to LW 290kHz and check the test point is less than 8.0V.

4. FM VT Check
   Settings : • Test point : TP1(VT)
   Method : Set to FM 108.0MHz and FM 87.5MHz. Then check that the test point is less than 8.0V(108.0MHz) and more than 0.5V(87.5MHz).

5. MW Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location : L981(1/3)
   Method : The level at 999kHz is adjusted to MAX by L981(1/3).

6. LW Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L941 .... 144kHz
   TC942 .... 290kHz
   Method : Set up TC942 to center before adjustment. The level at 144kHz is adjust to maximum by L941. Then the level at 290kHz is adjust to maximum by TC942.

7. FM Tracking Check
   Settings : • Test point : TP8(Lch), TP9(Rch)
   Method : • Set to FM 98.0MHz and check that the test point is less than 10.0dB.

8. AM IF Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L772 .... 450kHz

9. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4 (DC Balance)
   TP8, TP9 (Distortion)
   • Adjustment location : L771
   • Input level : 54dB
   Method : Set to FM 98.0MHz and adjust L771 so that the TP3 and TP4 output becomes 0V ± 0.04V.
   Next, check that the distortion is less than 1.3%.

10. Auto Stop Level Check
    AM
    Settings : • Input level : 52dB
    • Test point : TP5 (TUNE)
    Method : Set to 999kHz and check that the test point is 52dB +10/-15dB.

    FM
    Settings : • Input level : 25dB
    • Test point : TP5 (TUNE)
    Method : Set to FM 98.0MHz and check that the test point is 25dB ± 10dB.

< DECK SECTION >

11. Tape Speed Adjustment (DECK 1, DECK 2)
    Settings : • Test tape : TTA–100
    • Test point : TP8(Lch), TP9(Rch)
    • Adjustment location : SFR301
    Method : Play back the test tape and adjust SFR301 so that the frequency counter reads 3000Hz ± 5Hz.

12. Head Azimuth Adjustment (DECK 1, DECK 2)
    Settings : • Test tape : TTA–330
    • Test point : TP8(Lch), TP9(Rch)
    • Adjustment location : Head azimuth adjustment screw
    Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.
    Next, perform on each FWD PLAY and REV PLAY mode.

13. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–330
    • Test point : TP8(Lch), TP9(Rch)
    Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is 0 ± 5dB.

14. REC/PB Frequency Response Adjustment (DECK 2)
    Settings : • Test tape : TTA–602
    • Test point : TP8(Lch), TP9(Rch)
    • Input signal : 1kHz / 8kHz
    • Adjustment location : SFR451
    SFR452
    Method : Apply a 1kHz signal and REC mode.
    Then adjust OSC attenuator so that the output level at the TP8,TP9 becomes 8~10mV. Record and play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes 0 ± 0.5dB with respect to that of the 1kHz signal.

15. REC/PB Sensitivity Check (DECK 2)
    Settings : • Test tape : TTA–602
    • Test point : TP8(LCH), TP9(RCH)
    • Input signal : 1kHz
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 80~100mV. Record and play back the 1kHz signals and check that the output is 0 ± 3.5dB.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity : (THD 3%)	Less than 11dB [at 87.5MHz] Less than 10dB [at 98.0 / 108.0MHz]
S/N 50dB Quieting sensitivity (L-R) :	Less than 38dB [at 98.0MHz]
Signal to noise ratio :	(MONO) More than 68dB (STEREO) More than 66dB [at 98.0MHz]
Distortion :	(MONO)Less than 1.2% (STEREO)Less than 2.0% [at 98.0MHz]
Auto stop level :	25dB ± 10dB (MONO) [at 98.0MHz]
Stereo separation :	More than 14dB [at 98.0MHz]
Intermediate frequency :	10.7MHz

<MW SECTION>

Sensitivity : (S/N 20 dB)	Less than 60dB [at 603kHz] Less than 58dB [at 999 / 1404kHz]
Signal to noise ratio :	More than 36dB [at 999kHz]
Distortion :	Less than 1.5% [at 999kHz]
Auto stop level :	52dB + 10/-15dB [at 999kHz]
Intermediate frequency :	450kHz

<LW SECTION>

Sensitivity :	Less than 70dB [at 144kHz] Less than 66dB at 198kHz] Less than 66dB [at 290kHz]
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.35% (R.M.S)
Take-up torque :	30 ~ 60g-cm (FWD)
Back tension :	2 ~ 5g-cm (FWD)
F.FWD time :	Less than 120 sec
REWIND time :	Less than 120 sec
PB Output level :	2.8V ± 3.0dB
Distortion (REC/PB) :	Less than 2.0% (NORMAL, CrO2)
Noise level (PB) :	Less than 25mV (NORMAL)
Noise level (REC/PB) :	Less than 30mV (NORMAL)
Erasing ratio :	More than 60dB (at 125Hz, +10VU)
Test tape :	NORMAL : TTA–602 TTA–100

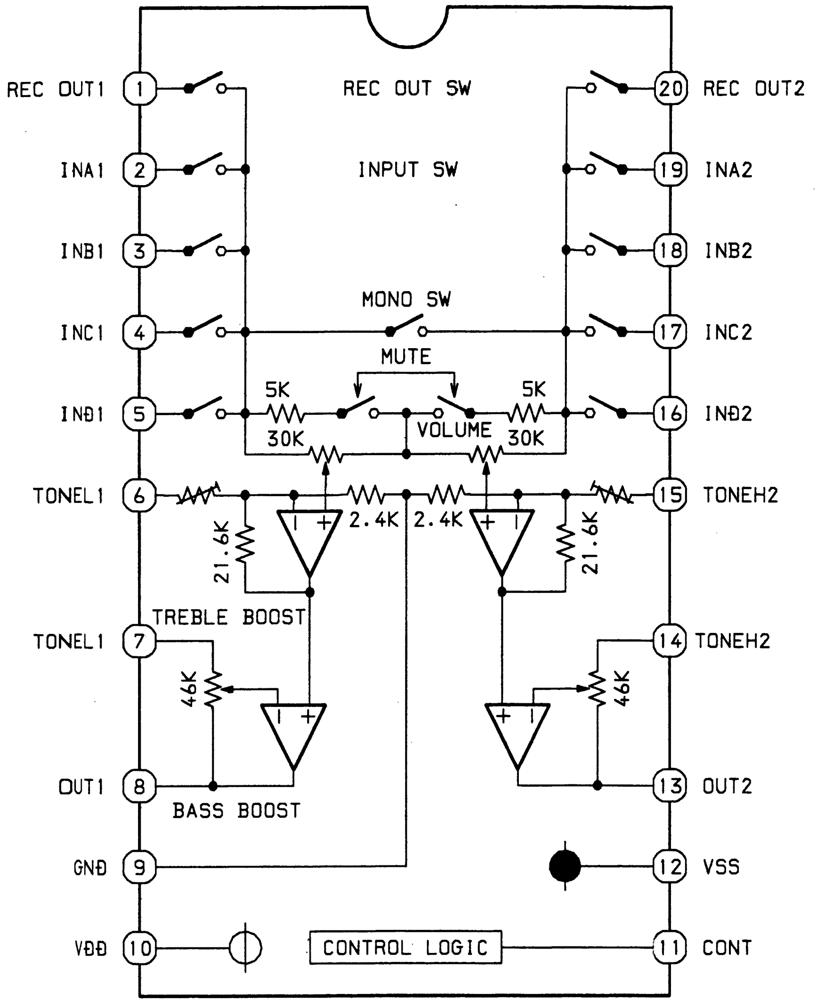
IC DESCRIPTION

IC, µPD780228G-018-3BA

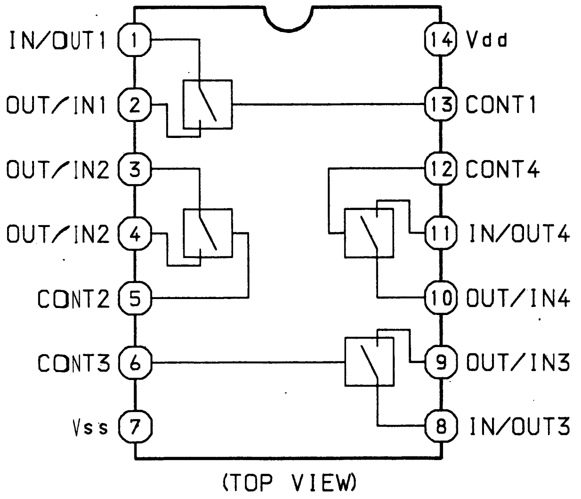
Pin No.	Pin Name	I/O	Description
1	K-SCAN	O	Key scan output.
2	RE VOL A	I	PALS data input A for encoder volume.
3	RE VOL B	I	PALS data input B for encoder volume.
4	D-CD	O	CD function LED control.
5	D-AUX	O	AUX function LED control.
6	D-TUNER	O	Tuner function LED control.
7	D-TAPE	O	Tape funtion LED control.
8	O-MUTE	O	Line Mute control for PRO-logic unit.
9	O-CD ON	O	CD unit power ON control. (H:ON)
10	O-TU ON	O	Tuner block power ON control. (H:ON)
11	O-BIAS	O	Bias oscillator control. (H:oscillation)
12	O-RMT	O	REC MUTE control. (L:REC)
13	O-PB1	O	TAPE 1/2 select control. (H:DECK1 play)
14	O-POWER	O	POWER ON control for audio block. (L:Power ON)
15	O-FCE	O	Latch control for shift register.
16	O-CD LED	O	CD flash window control. (H:Light up)
17	IC	-	Extension port (connected to GND).
18	VSS	-	System GND.
19	VDD	-	System VDD supply.
20	O-DISH RVS	O	CD turn table REVRSE control. (H:Reverse)
21	O-DISH FWD	O	CD turn table FORWARD control. (H:Forward)
22	O-OPEN	O	CD tray OPEN data output. (L:Open)
23	O-CLOSE	O	CD tray CLOSE data output. (L:Close)
24	I-SQ.DATA/I-IFC	I	CD SUBQ data input / tuner IF count input.
25	O-SQ.CLK/I-STEREO	I/O	CD SUBQ clock ouput / tuner mono,stereo selection input. (L:Stereo)
26	CLOCK/DSC	O	Clock output for shift register, DSP & PRO unit / DSC control for PRO unit
27	I-SENS/O-PLLCE	I/O	CD sense input / Tuner PLL chip enable output.
28	O-CD DATA/PLL CLK	O	CD data output / Tuner PLL clock output.
29	O-XLT/I-RDS CLK	I/O	CD XLT output / Tuner RDS clock input.
30	RES	I	Micon reset input.
31	O-CLK/I-RDS DATA	I/O	CD clock output / Tuner RDS data input.
32	PRO-CE	O	Latch control for PRO-Logic IC and DSP IC.
33	DATA/FDSC	O	Data control for shift register, DSP & Pro unit / DSC control for IC,M62439SP.
34	I-RMC	I	Serial data input from remote controller.
35	O-PLL DATA	O	DSC control for Function IC / Tuner PLL data output.
36	O-C.SHIFT	O	Micon clock shift output.
37	VDD1	-	Clock circuit VDD.
38	X2	-	4.19 MHz oscillator circuit.
39	X1	-	4.19 MHz oscillator circuit.
40	VSS1	-	Clock circuit VDD.
41	AVDD	I	VDD input for AD transfer.
42	HOLD	I	AC / DC detector.
43	I-CD-SW	I	CD tray SW detector.
44	I-DISH	I	CD turn-table detector.
45	I-RE-JOG	I	Pulse data input for rotary encoder.
46	I-SIG	I	Tuner RDS signal level input. (Not connected)
47	I-SPEANA	I	Data input for SPEANA light up.
48	I-KEY2	I	Tact key level input 2.
49	I-KEY1	I	Tact key level input 1.
50	AVSS	-	GND input for AD transfer.
51~58	P1~P8	O	FL segment scan output.
59	P9/TM-BASE	I/O	FL segment scan output / TM base input.
60	P10/RDS	I/O	FL segment scan output / RDS mode detect.
61	P11/OIRT	I/O	FL segment scan output / OIRT mode detect.
62	P12/LW	I/O	FL segment scan output / LW mode detect.
63	P13/AM.ST+FM.WIDE	I/O	FL segment scan output / AM stereo + FM wide mode detect.
64	P14/AM9K	I/O	FL segment scan output / Initial AM 9K mode detect.
65	P15/PRO.LOGIC	I/O	FL segment scan output / PRO-Logic mode detect.
66	P16/AC-3	I/O	FL segment scan output/DSP mode detect.
67	P17/SALSA	-	V load (-30V).
68	P18/HP.MUTE	I/O	FL segment scan output / Head Phone Mute input.
69	P19/SPEANA A	I/O	FL segment scan output / SPEANA level input timing A.
70	P 20/SPEANA B	I/O	FL segment scan output / SPEANA level input timing B.
71	P 21/SPEANA C	I/O	FL segment scan output / SPEANA level input timing C.
72~78	P22~P28	O	FL segment scan output.
79	VDD2	-	VDD or FL drive.
80	-VFL	-	Power supply for FL display.
81	P29/REC SW	I/O	FL segment scan output / TAPE REC SW detect.
82	P30/PB1 SW	I/O	FL segment scan output / TAPE PLAY1 SW detect.
83	P31/PB2 SW	I/O	FL segment scan output / TAPE PLAY2 SW detect.
84~87	P32~P35	O	FL segment scan output.
88~100	G13~G1	O	FL grid scan output.

IC BLOCK DIAGRAM

IC, M62439SP


REC OUT1 1
INA1 2
INB1 3
INC1 4
IND1 5
TONEL1 6
TONEL1 7
OUT1 8
GND 9
VDD 10
REC OUT2 20
INA2 19
INB2 18
INC2 17
IND2 16
TONEH2 15
TONEH2 14
OUT2 13
VSS 12
CONT 11
REC OUT SW
INPUT SW
MONO SW
MUTE
5K
5K
30K
30K
VOLUME
2.4K
2.4K
21.6K
21.6K
TREBLE BOOST
46K
46K
BASS BOOST
CONTROL LOGIC

IC, BU4066BCF

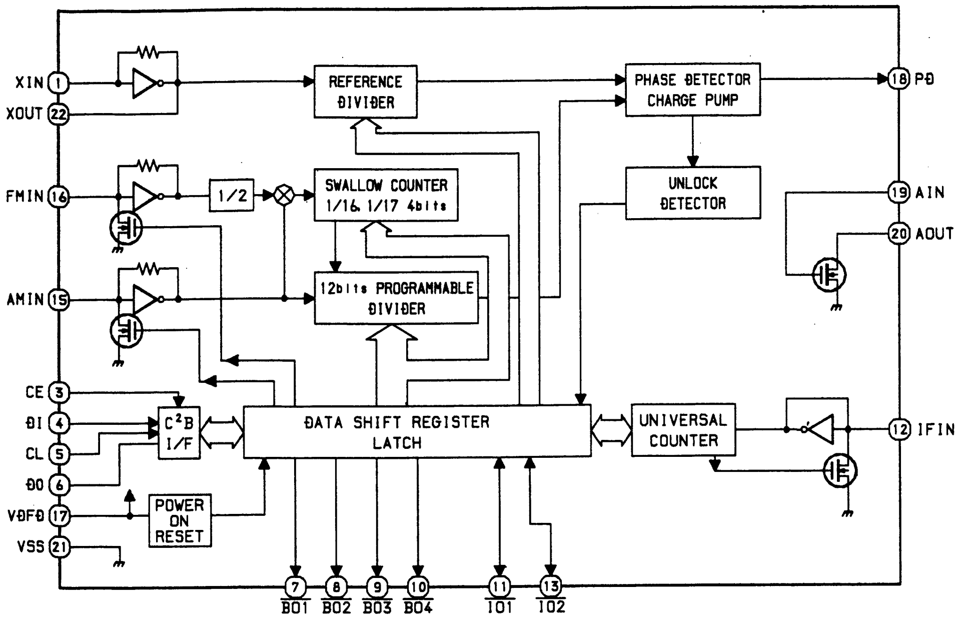

IN/OUT1 1
OUT/IN1 2
OUT/IN2 3
OUT/IN2 4
CONT2 5
CONT3 6
Vss 7
Vdd 14
CONT1 13
CONT4 12
IN/OUT4 11
OUT/IN4 10
OUT/IN3 9
IN/OUT3 8

(TOP VIEW)

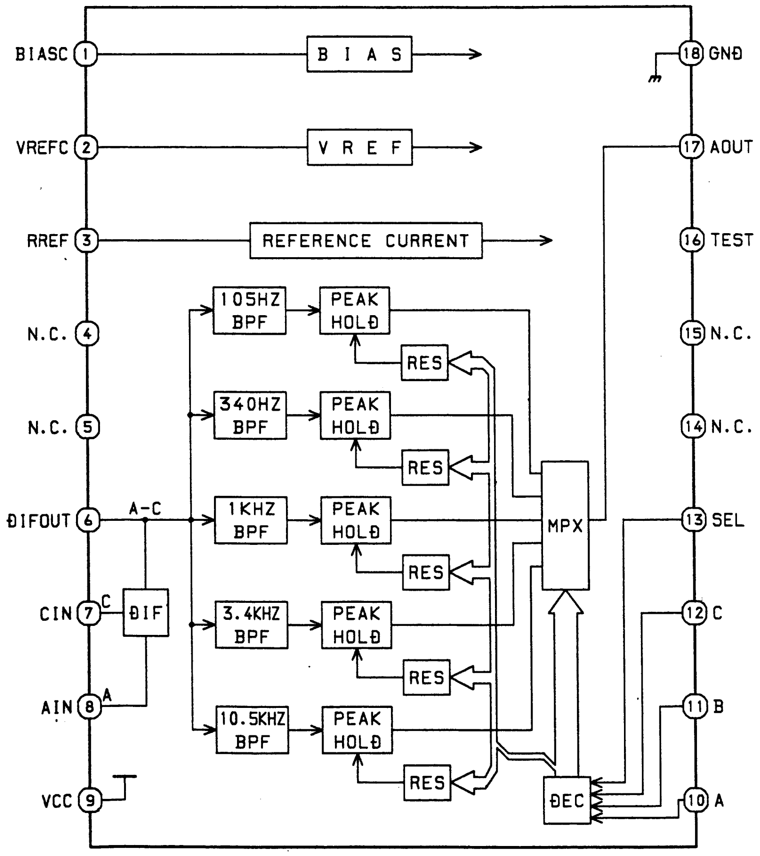
TRUTH TABLE

CONTROL	Impedance Between IN/OUT-OUT/IN
H	$0.5 \sim 5 \times 10^2 \Omega$
L	$> 10^2 \Omega$

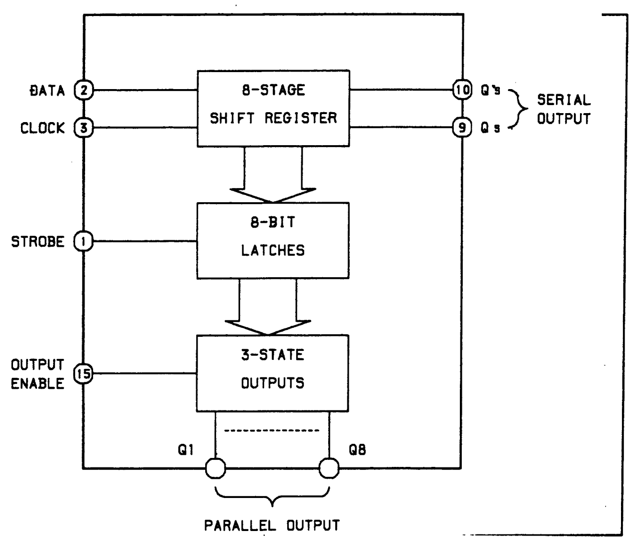
IC, LC72131


XIN 1
XOUT 22
FMIN 16
AMIN 15
CE 3
DI 4
CL 5
DO 6
VDFD 17
VSS 21
PD 18
AIN 19
AOUT 20
IFIN 12
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
UNLOCK DETECTOR
1/2
SWALLOW COUNTER 1/16, 1/17 4bits
12bits PROGRAMMABLE DIVIDER
C²B I/F
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
POWER ON RESET
7 BO1
8 BO2
9 BO3
10 BO4
11 IO1
13 IO2

IC, BA3835S


BIASC 1
VREFC 2
RREF 3
N.C. 4
N.C. 5
DIFOUT 6
CIN 7
AIN 8
VCC 9
GND 18
AOUT 17
TEST 16
N.C. 15
N.C. 14
SEL 13
C 12
B 11
A 10
B I A S
V R E F
REFERENCE CURRENT
105HZ BPF
340HZ BPF
1KHZ BPF
3.4KHZ BPF
10.5KHZ BPF
PEAK HOLD
RES
A-C
C
DIF
A
MPX
DEC

IC, BU4094BCF


DATA 2
CLOCK 3
8-STAGE SHIFT REGISTER
10 Q's
9 Qs
SERIAL OUTPUT
8-BIT LATCHES
STROBE 1
3-STATE OUTPUTS
OUTPUT ENABLE 15
Q1
Q8
PARALLEL OUTPUT

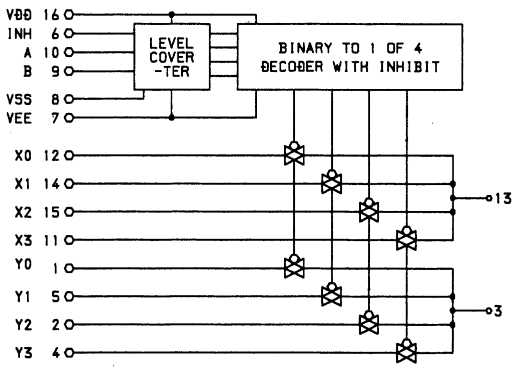
TRUTH TABLE

CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	Qs	Q's
↑	L	X	X	Z	Z	Q7	NO Chg.
↓	L	X	X	Z	Z	No Chg.	Qs
↑	H	L	X	No Chg.	No Chg.	Q7	No Chg.
↑	H	H	L	L	Qn-1	Q7	No Chg.
↑	H	H	H	H	Qn-1	Q7	No Chg.
↓	H	X	X	No Chg.	No Chg.	No Chg.	Qs

Z=High Impedance

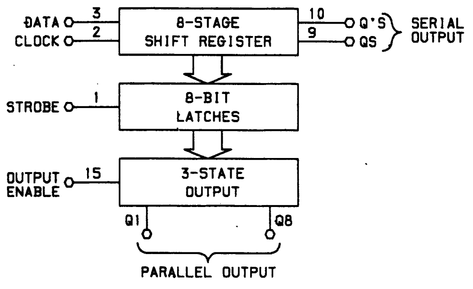
X=Don't Care ✓ BU4052BCF

IC, BU4052BCF

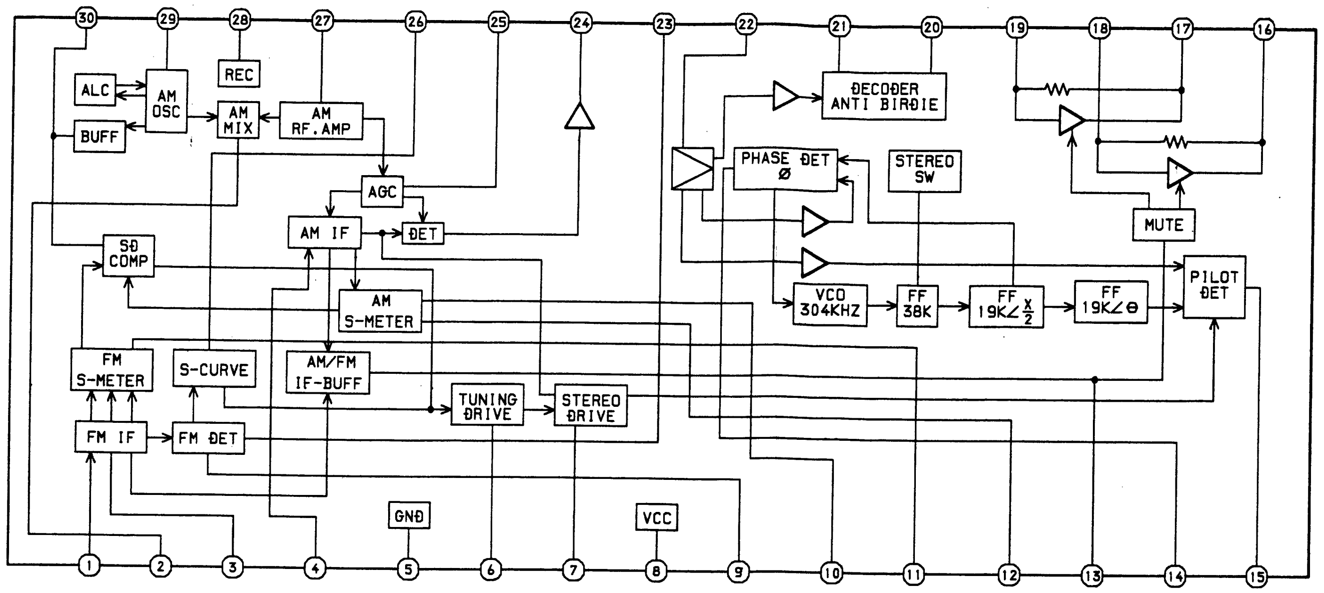

VDD 16
INH 6
A 10
B 9
VSS 8
VEE 7
LEVEL COVER -TER
BINARY TO 1 OF 4 DECODER WITH INHIBIT
X0 12
X1 14
X2 15
X3 11
Y0 1
Y1 5
Y2 2
Y3 4
13
3

TRUTH TABLE

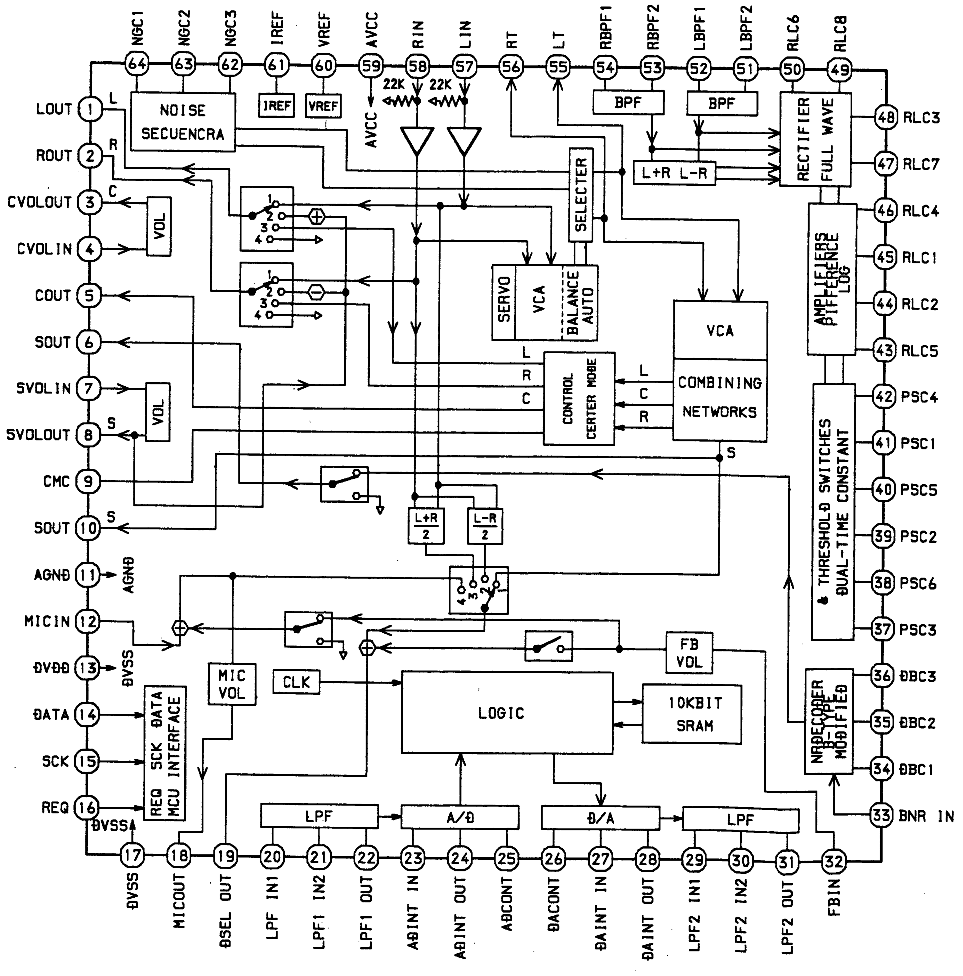
INHIBIT	A	B	ON SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	NONE


DATA 3
CLOCK 2
8-STAGE SHIFT REGISTER
10 Q'S
9 QS
SERIAL OUTPUT
STROBE 1
8-BIT LATCHES
OUTPUT ENABLE 15
3-STATE OUTPUT
Q1
Q8
PARALLEL OUTPUT

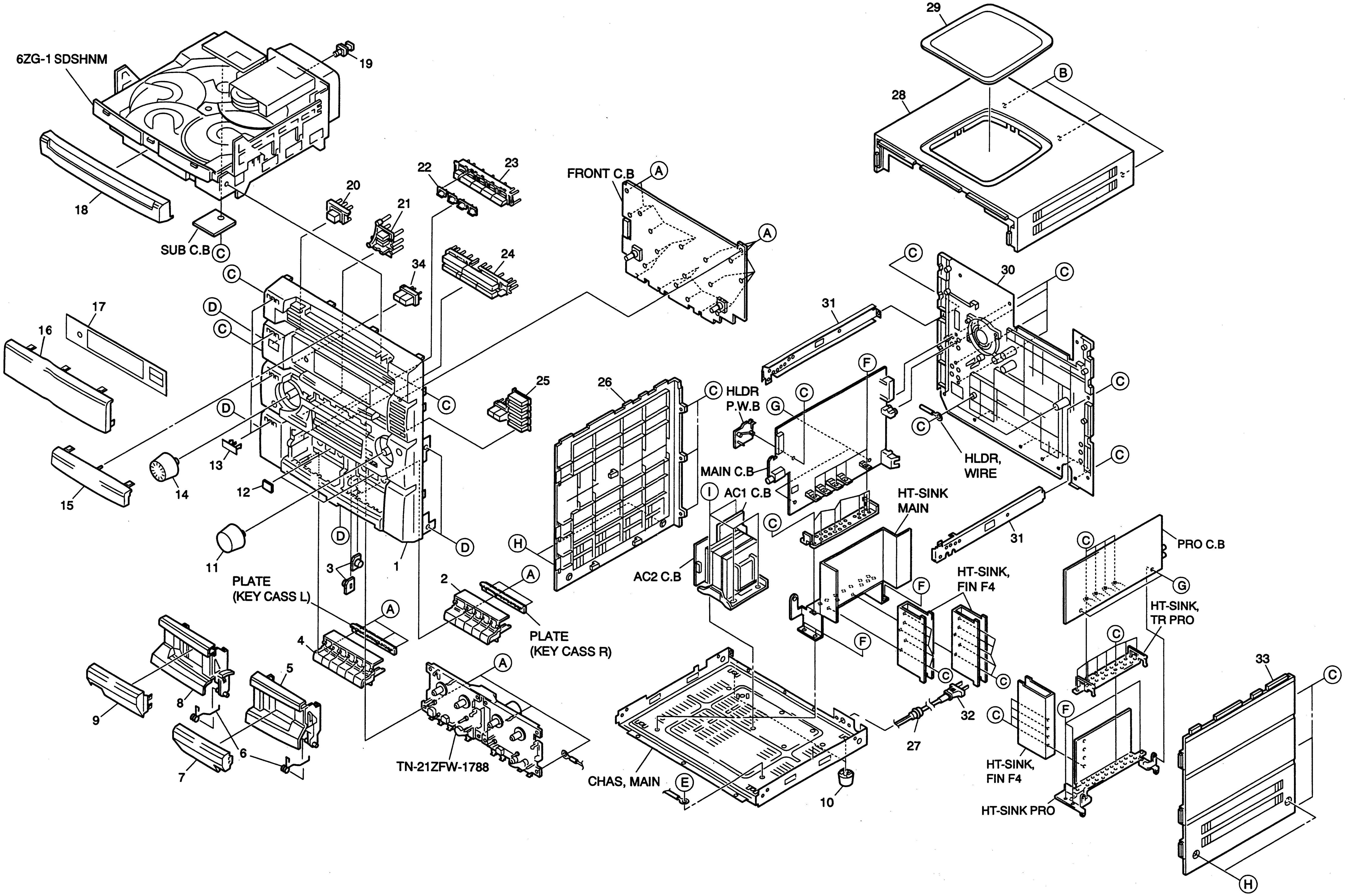
IC, LA1837


ALC
BUFF
AM OSC
REC
AM MIX
AM RF.AMP
AGC
AM IF
DET
SD COMP
AM S-METER
FM S-METER
S-CURVE
AM/FM IF-BUFF
FM IF
FM DET
TUNING DRIVE
STEREO DRIVE
GND
VCC
DECODER ANTI BIRDIE
PHASE DET Ø
STEREO SW
MUTE
PILOT DET
VCO 304KHZ
FF 38K
FF 19K∠X/2
FF 19K∠θ
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

IC, M62463FP


NGC1 64
NGC2 63
NGC3 62
IREF 61
VREF 60
AVCC 59
RIN 58
LIN 57
RT 56
LT 55
RBPF1 54
RBPF2 53
LBPF1 52
LBPF2 51
RLC6 50
RLC8 49
LOUT 1
ROUT 2
CVOLOUT 3
CVOLIN 4
COUT 5
SOUT 6
SVOLIN 7
SVOLOUT 8
CMC 9
SOUT 10
AGND 11
MICIN 12
DVDD 13
DATA 14
SCK 15
REQ 16
DVSS 17
MICOUT 18
DSEL OUT 19
LPF IN1 20
LPF1 IN2 21
LPF1 OUT 22
ADINT IN 23
ADINT OUT 24
ADCONT 25
DACONT 26
DAINT IN 27
DAINT OUT 28
LPF2 IN1 29
LPF2 IN2 30
LPF2 OUT 31
FBIN 32
BNR IN 33
DBC1 34
DBC2 35
DBC3 36
PSC3 37
PSC6 38
PSC2 39
PSC5 40
PSC1 41
PSC4 42
RLC5 43
RLC2 44
RLC1 45
RLC4 46
RLC7 47
RLC3 48
NOISE SECUENCRA
IREF
VREF
22K
22K
AVCC
BPF
BPF
L+R L-R
SELECTER
RECTIFIER FULL WAVE
AMPLIFIERS DIFFERENCE LOG
VOL
SERVO
VCA
BALANCE AUTO
VCA
CONTROL CENTER MODE
COMBINING NETWORKS
THRESHOLD SWITCHES DUAL-TIME CONSTANT
L+R/2
L-R/2
FB VOL
MIC VOL
CLK
LOGIC
10KBIT SRAM
REQ SCK DATA MCU INTERFACE
NRDECODER B-TYPE MODIFIED
LPF
A/D
D/A
LPF
AGND
DVSS

MECHANICAL EXPLODED VIEW 1 / 1


6ZG-1 SDSHNM
19
18
SUB C.B
C
20
21
22
23
34
24
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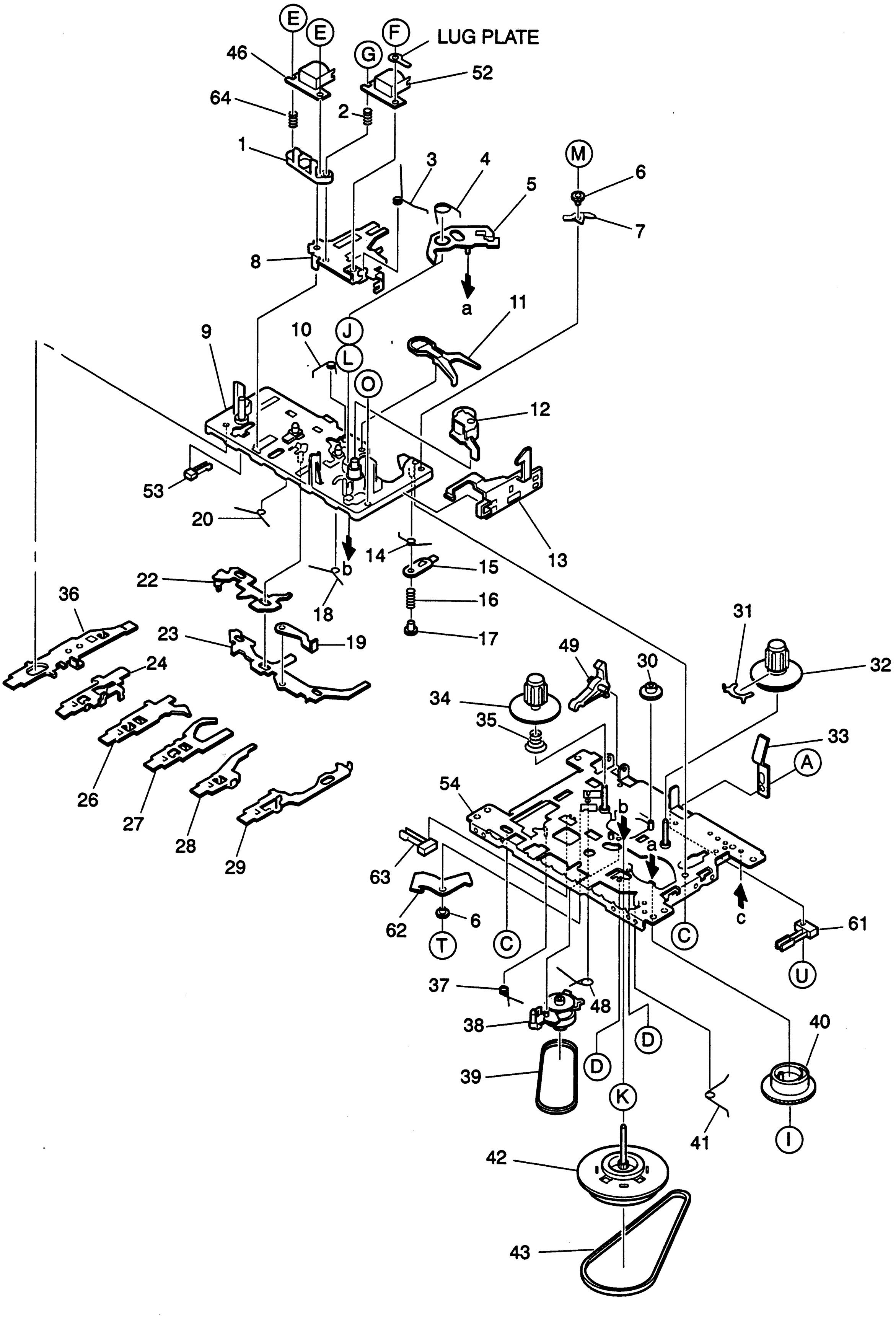
MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-MAR-003-010		CABI,FR K
2	88-MA4-018-010		KEY,CASS R
3	86-NFZ-231-010		DMPR,70
4	88-MA4-017-010		KEY,CASS L
5	88-MA4-007-010		BOX,CASS R
6	82-NF7-218-010		SPR-T,CASS
7	88-MA4-023-010		WINDOW,CASS R
8	88-MA4-006-010		BOX,CASS L
9	88-MA4-022-010		WINDOW,CASS L
10	87-MA3-062-010		FOOT, H17
11	88-MA1-030-010		KNOB,RTRY MAIN
12	81-532-080-010		LABEL, CASS. COMPT
13	82-NE8-032-010		BADGE,AIWA 27.5
14	88-MA1-031-010		KNOB,RTRY JOG
15	88-MA4-019-010		WINDOW,CD
16	88-MAR-019-010		WINDOW,AMP PRO
17	88-MAR-018-010		PLATE,PRO
18	88-MA4-008-010		PANEL,TRAY
19	84-ZG1-245-210		CAP,OPTICAL
20	88-MAR-017-010		KEY,POWER(A24)
21	88-MA4-012-010		KEY,JOG
22	88-MA4-024-010		REFLECTOR,FUN
23	88-MAR-023-010		KEY,FUN PRO
24	88-MA4-015-010		KEY,PLAY (RDS)
25	88-MA4-009-010		KEY,DIRECT

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
26	88-MA3-016-010		PANEL,SIDE L3
27	87-085-185-010		BUSHING, AC CORD (E)
28	88-MA3-015-010		PANEL,TOP 3
29	86-MA3-042-010		WINDOW,TOP
30	88-MAR-005-010		CABI,REAR K
31	88-MA1-208-010		JOINT,CABI
⚠ 32	87-A80-007-110		AC CORD ASSY,K BLK
33	88-MA3-017-010		PANEL,SIDE R3
34	88-MAR-016-010		KEY,PRO
A	87-078-060-010		BVIT3PB+3-10
B	87-067-758-010		BVT2+3-12 W/O SLOT
C	87-067-703-010		TAPPING SCREW, BVT2+3-10
D	87-591-095-410		TAPPING SCREW, QIT+3-8 (GLD)
E	87-067-688-010		BVTT+3-6
F	87-067-579-010		TAPPING SCREW, BVT2+3-8
G	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
H	87-067-641-010		UTT2+3-8(W/O SLOT)BL
I	87-067-975-010		S-SCREW,IT+4-8

TAPE MECHANISM EXPLODED VIEW 1 / 2



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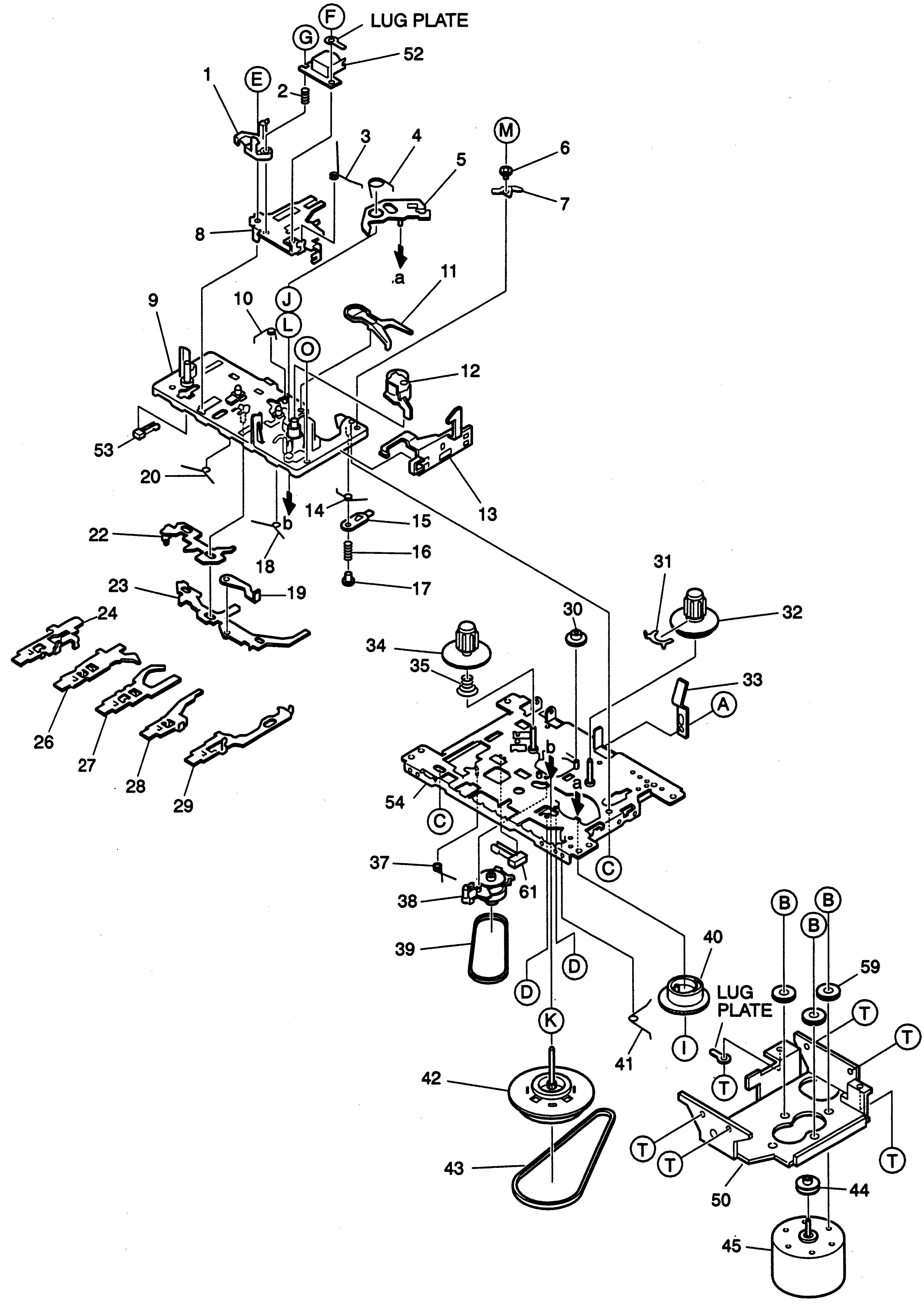
TAPE MECHANISM PARTS LIST 1 / 2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-060		HEAD BASE
2	S1-821-030-070		AZIMUTH SPRING
3	S1-921-030-090		PANEL P SPRING
4	S1-921-260-050		GEAR PLATE SPRING
5	S1-921-265-020		GEAR PLATE ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-140		HEAD PANEL
9	S1-921-143-170		BASE ASSY
10	S1-921-141-8A0		M CONTROL SPRING
11	S1-921-260-4A0		SENSING LEVER
12	S1-921-043-100		PINCH ROLLER ARM ASSY
13	S1-921-130-020		EJECT SLIDE LEVER
14	S1-921-141-3A0		P CONTROL SPRING
15	S1-921-140-550		PAUSE LEVER(E)
16	S1-921-140-120		PAUSE LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER
18	S1-921-140-150		BUTTON LEVER SPRING(B)
19	S1-921-140-640		E KICK LEVER
20	S1-921-140-140		BUTTON LEVER SPRING(A)
22	S1-921-140-090		SWITCH ACTUATOR
23	S1-921-140-080		PUSH BUTTON ACTUATOR
24	S1-921-140-230		PLAY BUTTON LEVER
26	S1-921-140-240		REW BUTTON LEVER
27	S1-921-140-250		FF BUTTON LEVER
28	S1-921-140-660		STOP BUTTON LEVER
29	S1-921-140-610		PAUSE BUTTON LEVER
30	S1-821-100-700		FF GEAR
31	S1-921-050-060		SENSER
32	S1-921-053-100		TAKE UP REEL ASSY
33	S1-829-100-010		PACK SPRING
34	S1-921-050-150		S REEL HUB
35	S1-921-050-220		BACK TENSION SPRING
36	S1-921-140-220		REC BUTTON LEVER
37	S1-921-140-170		P.S.LEVER SPRING
38	S1-921-073-080		RF CLUTCH ASSY
39	S1-821-070-110		RF BELT
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-093-210		FLYWHEEL ASSY
43	S1-921-090-240		MAIN BELT
46	S6-202-140-190		E,HEAD
48	S1-921-140-210		REC BUTTON LEVER SPRING
49	S1-821-100-690		RECORD SAFETY LEVER
52	S6-202-010-920		R.P HEAD MS15R-AK0N1
53	S6-401-011-490		LEAF SW MSW-1541T
54	S1-921-015-010		CHASSIS ASSY
61	S6-401-010-380		LEAF SWITCH MSW-1275
62	S1-921-020-010		REC ARM
63	S6-401-011-610		LEAF SW MSW-17820MVE1
64	S1-821-030-080		EH SPRING
A	S9-P04-200-310		TAPPING SCREW 2-3
C	S9-B10-200-510		P TAPPING BIND ACREW M2-5
D	S9-C07-204-510		SCREW,TAPPING M2-4.5
E	S9-P17-205-710		+-CAP SCREW M2-7.5
F	S9-B01-200-310		+ BIND SCREW M2-3
G	S9-F08-200-710		AZIMUTH SCREW M2-7
I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
K	S9-W01-400-100		P WASHER 2-3.5-0.4
L	S9-W01-130-200		P WASHER 2.1-4-0.13
M	S9-P08-203-010		PS TAPPING SCREW M2-5
O	S9-P05-200-610		S TAPPING SCREW M2-6
T	S9-P04-200-410		C TAPPING SCREW M2-4
U	S9-P04-200-510		C TAPPING SCREW M2-5

TAPE MECHANISM EXPLODED VIEW 2 / 2



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TAPE MECHANISM PARTS LIST 2 / 2

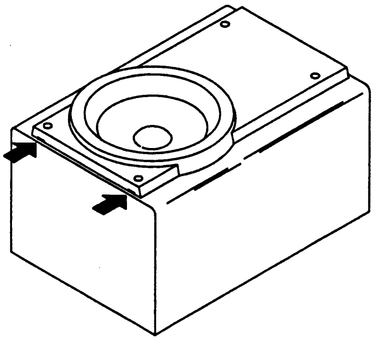
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE
2	S1-821-030-070		AZIMUTH SPRING
3	S1-921-030-090		PANEL P SPRING
4	S1-921-260-050		GEAR PLATE SPRING
5	S1-921-265-020		GEAR PLATE ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-110		HEAD PANEL
9	S1-921-143-010		BASE ASSY
10	S1-921-141-8A0		M CONTROL SPRING
11	S1-921-260-4A0		SENSING LEVER
12	S1-921-043-100		PINCH ROLLER ARM ASSY
13	S1-921-130-020		EJECT SLIDE LEVER
14	S1-921-141-3A0		P CONTROL SPRING
15	S1-921-140-550		PAUSE LEVER(E)
16	S1-921-140-120		PAUSE LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER
18	S1-921-140-150		BUTTON LEVER SPRING(B)
19	S1-821-011-590		E KICK LEVER
20	S1-921-140-140		BUTTON LEVER SPRING(A)
22	S1-921-140-090		SWITCH ACTUATOR
23	S1-921-140-080		PUSH BUTTON ACTUATOR
24	S1-921-140-230		PLAY BUTTON LEVER
26	S1-921-140-240		REW BUTTON LEVER
27	S1-921-140-250		FF BUTTON LEVER
28	S1-921-140-260		STOP BUTTON LEVER
29	S1-921-140-610		PAUSE BUTTON LEVER
30	S1-821-100-700		FF GEAR
31	S1-921-050-060		SENSER
32	S1-921-053-100		TAKE UP REEL ASSY
33	S1-829-100-010		PACK SPRING
34	S1-921-050-150		S REEL HUB
35	S1-921-050-220		BACK TENSION SPRING
37	S1-921-140-170		P.S.LEVER SPRING
38	S1-921-073-080		RF CLUTCH ASSY
39	S1-821-070-110		RF BELT
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-093-240		FLYWHEEL ASSY
43	S1-921-090-240		MAIN BBELT
44	S1-921-120-130		MOTOR PULLEY
45	S6-002-030-290		MOTOR EG530YD-2BH
50	S1-921-120-110		MOTOR BRACKET
52	S6-202-010-920		R.P HEAD MS15R-AK0N1
53	S6-401-011-490		LEAF SW MSW-1541T
54	S1-921-015-010		CHASSIS ASSY
59	S1-820-130-060		MOTOR RUBBER
61	S6-401-011-610		LEAF SW MSW-17820MVE1
A	S9-P04-200-310		TAPPING SCREW 2-3
B	S1-821-120-020		MOTOR COLLER SCREW
C	S9-B10-200-510		P TAPPING BIND ACREW M2-5
D	S9-C07-204-510		SCREW,TAPPING M2-4.5
E	S9-P01-200-610		SCREW M2-6
F	S9-B01-200-310		+ BIND SCREW M2-3
G	S9-F08-200-710		AZIMUTH SCREW M2-7
I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
K	S9-W01-400-100		P WASHER 2-3.5-0.4
L	S9-W01-130-200		P WASHER 2.1-4-0.13
M	S9-P08-203-010		PS TAPPING SCREW M2-5
O	S9-P05-200-610		S TAPPING SCREW M2-6
T	S9-P04-200-410		C TAPPING SCREW M2-4

SPEAKER DISASSEMBLY INSTRUCTIONS

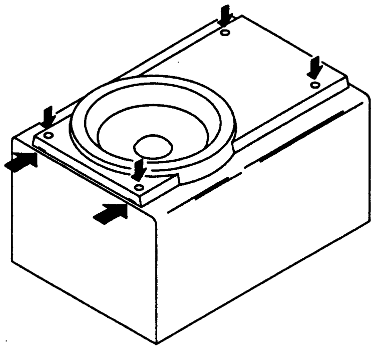
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



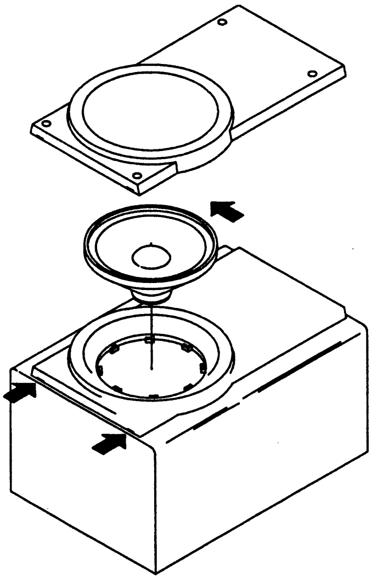
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

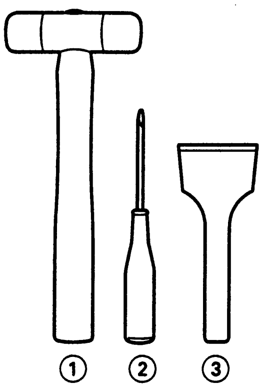


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

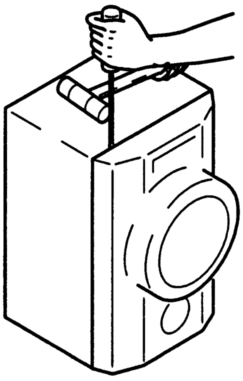


Fig-1

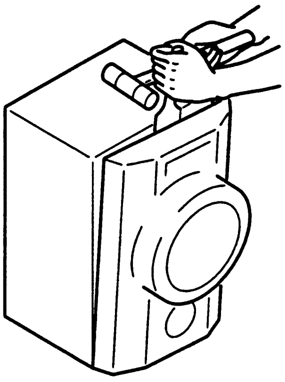


Fig-2

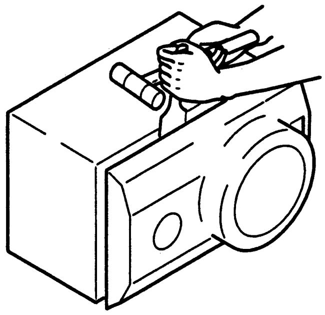


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SX-ZR50 (YBNY)
SPEAKER PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-MSP-010-010		GRILLE,FRAME ASSY
2	88-MSR-601-010		SPKR,W 160
3	85-MS5-613-010		SPKR,TW 60
4	86-VSR-605-010		SPKR,CERAMIC

SX-CR676 (YBNC)
SPEAKER PARTS LIST

NOTE: This SX-CR676 speaker contains SX-C606 (center speaker) and SX-R276 (rear speaker).

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-YS7-001-010		PANEL,FR B(C606)
2	87-YS3-003-010		GRILLE,FRAME ASSY(C606)
3	83-NSM-010-010		SPEAKER CORD(C606)
4	87-YS7-602-010		SPKR,100(C606)
5	87-YS6-001-010		CABI,REAR B(R276)
6	87-YS1-004-010		GRILLE FRAME ASSY(R276)
7	87-YS1-002-010		GRILLE,FRAME(R276)
8	81-VSA-009-010		CORD BUSH(R276)
9	87-YS6-002-010		SPKR, CORD Y(R276)
10	87-YS6-601-010		SPKR, 100(R276)
11	87-010-384-010		CAP,E 100-25 SME(R276)
12	87-YS8-906-010		IB,Y(9L)O(R276)

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-A90-030-010		AM,LOOP AM-NC 2
2	87-043-106-010		ANT,FM 1007 AWG
3	88-MAR-905-010		IB,K(E)M
4	88-MAR-701-010		RC UNIT,RC-8AS01

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
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アイワ株式会社
AIWA CO.,LTD.

9301978, 750038

Tokyo Japan

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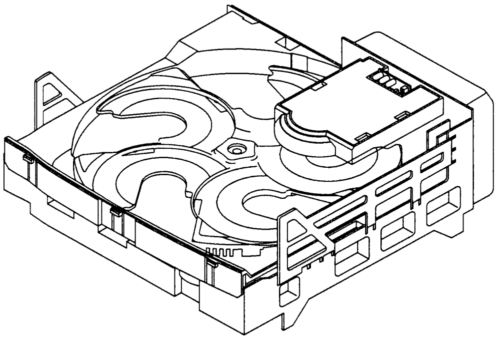
Printed in Singapore

aiwa

aiwa SERVICE

6ZG-1S
6ZG-1S2
6ZG-1S3



CD MECHANISM

- BASIC CD MECHANISM: 3ZG-2 E2
- TYPE: English

SERVICE MANUAL

BASIC NAME	DERIVATION NAME					
6ZG-1S	D	SH				
6ZG-1S2	D	SH				
6ZG-1S3	D	SH				

■ This mechanism has various derivation. Derivation name is indicated by the Service Manual for eath model.

S/M Code No. 09-984-249-90T

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6ZG-1S3

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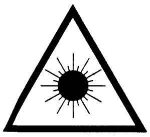
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- ■ Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- ■ Advarsel: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

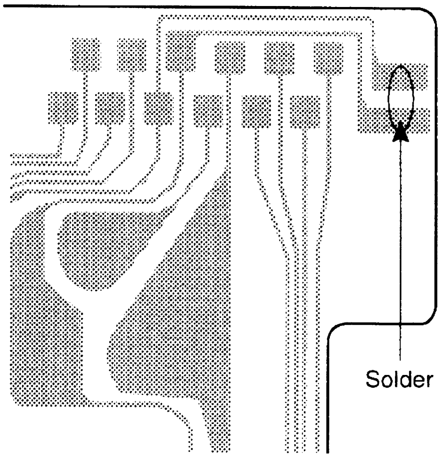
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block (KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



This is the SERVICE MANUAL for the BASIC CD MECHANISM of BASIC NAME: 6ZG-1. This BASIC NAME includes the following models as shown under the SUFFIX name: DERIVATION NAME. Please use this manual with the separate SERVICE MANUAL for DERIVATION NAME.

BASIC CD MECHANISM: 6ZG-1 DSH

SUFFIX
(DERIVATION NAME)

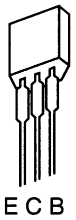
BASIC NAME: 6ZG-1S (SONY IC HIGH END MODEL)
6ZG-1S2 (The 2nd SONY IC MODEL)
6ZG-1S3 (The 3rd SONY IC MODEL)

BASIC NAME	DERIVATION NAME					
6ZG-1S	D	SH	—	—	—	—
6ZG-1S2	D	SH	—	—	—	—
6ZG-1S3	D	SH	—	—	—	—

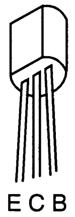
DERIVATION NAME

D:	Digital output function
SH:	Pick up equipped with shutter

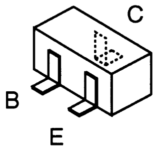
TRANSISTOR ILLUSTRATION



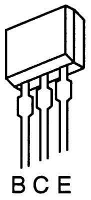
2SA933S
DTC114ES



2SA1015
2SC2001
2SD2172
2SD655



2SA1235
2SC2412
2SC2712
DTA114EK
DTC114EK
DTC114TK
DTC123JK
DTC143TK



2SB1329

DISASSEMBLY INSTRUCTIONS

1. How to replace PICK UP.

1) Open the TRAY.
   Push the stopper to arrow direction and release half of the SHAFT SLED.
2) Turn GEAR MAIN CAM to the counterclockwise (arrow "a") direction, and lift up CD mechanism. (Fig-1)
3) Remove SHAFT SLED.
4) CD mechanism in down position, replace PICK UP.
5) Lift up CD mechanism (Fig-1), and Reassemble the SHAFT SLED.

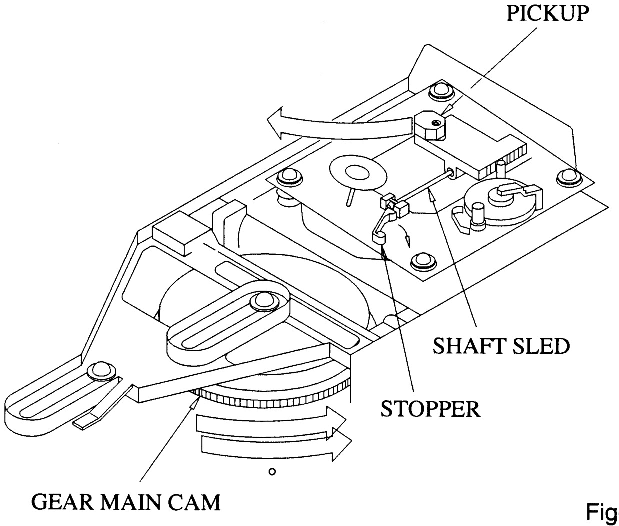

PICKUP
SHAFT SLED
STOPPER
GEAR MAIN CAM

Fig-1

2. How to remove the 5CD CHANGER BLOCK (Fig-2)

1) Remove the two FFC of the CD circuit board, and remove the five SCREWS.
2) Lift 5 CD CHANGER BLOCK from behind, and remove it. (5CD CHANGER BLOCK can be removed even if PANEL TRAY is not removed.)

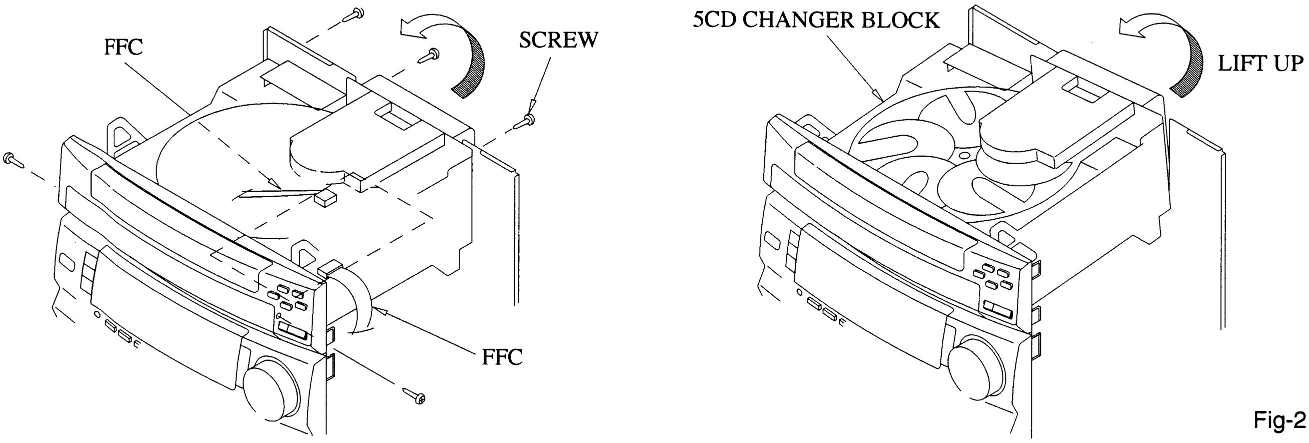

FFC
SCREW
FFC
5CD CHANGER BLOCK
LIFT UP

Fig-2

3. The disassemble and reassemble the TRAY

3-1. Disassembling procedure.

1) Push the PLATE GEAR'S Boss at the bottom part of CHAS MECHA strongly to the outside (arrow "b" direction). (Fig-3)
   (Confirm that TRAY appears a little in the front.)
2) Draw TRAY to the open position.
3) Remove FFC, and push the two LEVERS at both side of the CHAS MECH to remove TRAY. (Fig-4)

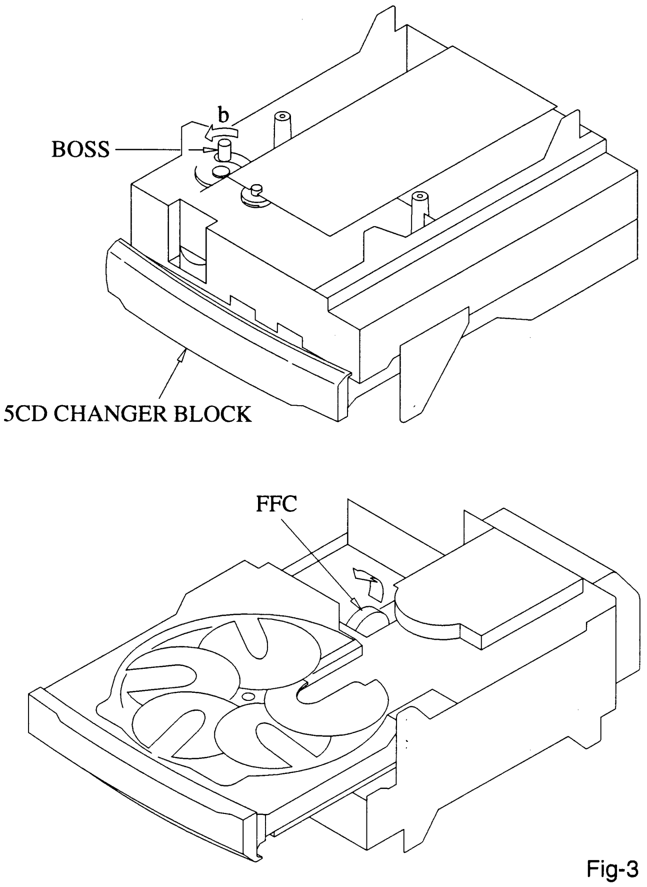


Fig-3

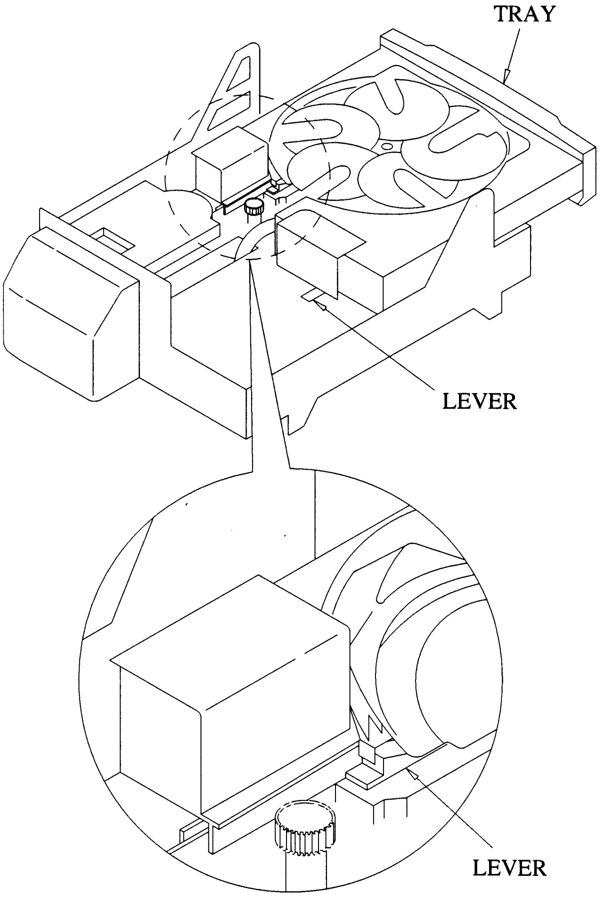


Fig-4

3-2. Reassembling procedure.

1) Confirm that LEVER TRAY is at the most right position and check for the CD Mechanism to be in the down position. (Fig-5)
2) Push in the TRAY along the rail of the CHAS MECHA.
3) After TRAY is half closed and FFC is put in, it can enter by force until the end of TRAY closed. (Fig-6)

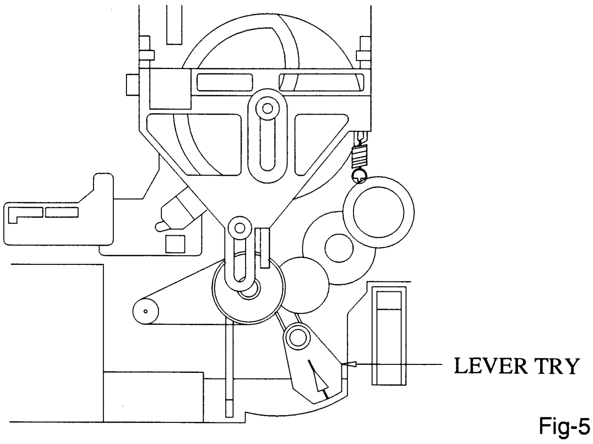


Fig-5

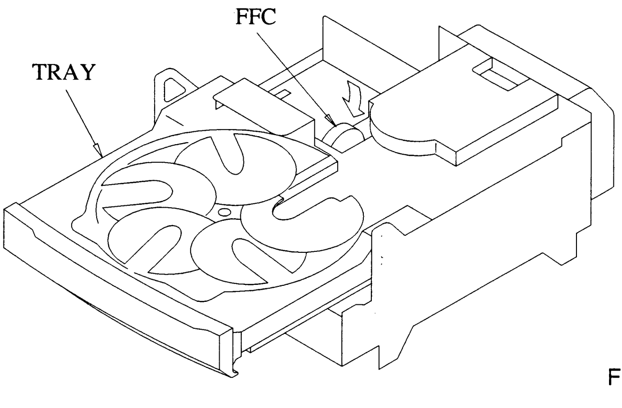


Fig-6

4. How to reassemble the TURN TABLE. (Fig-7)

1) Push LEVER TT in the direction of "C", and put in the TURN TABLE 5CD. (Fig-7)
   After reassembly, one of the TURN TABLE DISC TRAY (can be either one of the five disc trays) must be aligned with TURN TABLE 5CD. (Fig-8)
   That is, having no gap difference between the TURN TABLE 5CD and the TRAY 5CD.

* When reassembling the TURN TABLE 5CD, it is acceptable facing any CD number (1-5).

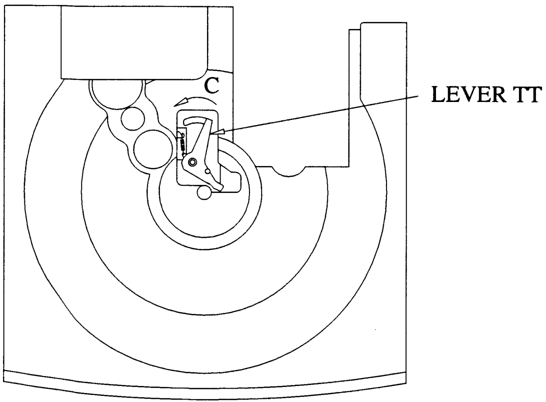


Fig-7

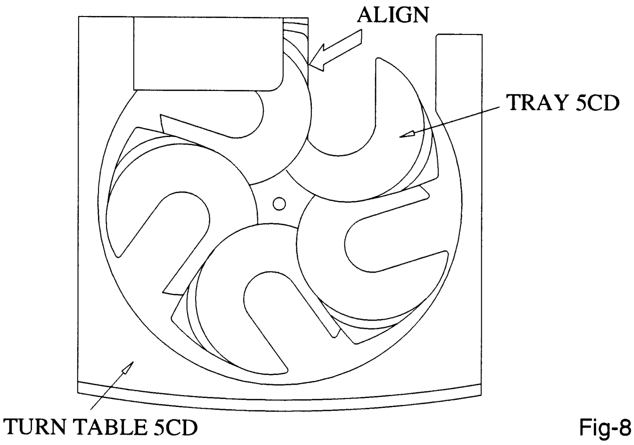


Fig-8

MODEL NO. 6ZG-1S

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-546-010		C-IC,CXD2589Q
	87-A20-592-040		C-IC,M51943 AML
	87-070-305-010		IC,BA6897S
	87-001-982-010		IC,TA7291S
TRANSISTOR			
	89-406-555-080		TR,2SD655 (0.5W)
	87-026-463-080		TR,2SA933S (0.3W)
	89-421-722-380		TR,2SD2172V/W
	89-320-011-080		TR,2SC2001 (15W)
	87-026-223-080		TR,DTC143TK
	89-110-155-080		TR,2SA1015(0.4W)
	87-026-608-080		C-TR,DTC 123 JK
	89-327-125-080		CHIP TR,2SC2712GR<D>
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)
CD MAIN C.B			
C1	87-010-196-020		C-CAP,S 0.1-25 F
C2	87-010-260-080		CAP, ELECT 47-25V
C4	87-010-197-020		C-CAP,S 0.01-25 B
C101	87-010-263-040		CAP,E 100-10
C102	87-010-178-020		C-CAP,S 1000P-50 B
C103	87-010-550-040		CAP,E 100-6.3 GAS
C104	87-010-182-020		C-CAP,S 2200P-50 B
C105	87-010-198-020		C-CAP,S 0.022-25 B
C106	87-016-081-020		C-CAP,S 0.1-16 RK
C107	87-016-081-020		C-CAP,S 0.1-16 RK
C108	87-016-081-020		C-CAP,S 0.1-16 RK
C109	87-010-497-040		CAP,E 4.7-35 GAS
C110	87-010-198-080		CAP, CHIP 0.022
C111	87-010-197-020		C-CAP,S 0.01-25 B
C112	87-010-402-040		CAP,E 2.2-50 SME
C113	87-010-382-040		CAP,E 22-25 SME
C114	87-010-213-020		C-CAP,S 0.015-25 B
C115	87-010-263-040		CAP,E 100-10
C116	87-010-197-020		C-CAP,S 0.01-25 B
C117	87-016-369-020		C-CAP,S 0.033-25 B K
C118	87-010-197-020		C-CAP,S 0.01-25 B
C119	87-016-369-020		C-CAP,S 0.033-25 B K
C120	87-010-197-020		C-CAP,S 0.01-25 B
C121	87-010-494-040		CAP,E 1-50 GAS
C122	87-010-154-020		C-CAP,S 10P-50 CH
C123	87-010-154-020		C-CAP,S 10P-50 CH
C124	87-010-154-020		C-CAP,S 10P-50 CH
C125	87-010-596-020		C-CAP,S 0.047-16 RK
C126	87-010-596-020		C-CAP,S 0.047-16 RK
C127	87-012-140-020		C-CAP,S 470P-50 CH
C128	87-010-596-020		C-CAP,S 0.047-16 RK
C129	87-010-198-020		C-CAP,S 0.022-25 B
C130	87-016-081-020		C-CAP,S 0.1-16 RK
C131	87-010-550-040		CAP,E 100-6.3 GAS
C132	87-010-550-040		CAP,E 100-6.3 GAS
C133	87-012-158-020		C-CAP,S 390P-50 J CH
C150	87-010-145-020		C-CAP,S 1P-50 C CH
C202	87-010-596-020		C-CAP,S 0.047-16 RK
C203	87-010-188-020		C-CAP,S 6800P-50 B
C204	87-012-156-020		C-CAP,S 220P-50 CH
C205	87-018-134-080		CAPACITOR,TC-U 0.01-16
C206	87-010-400-040		CAP,E 0.47-50
C207	87-010-197-020		C-CAP,S 0.01-25 B
C208	87-010-318-020		C-CAP,S 47P-50 CH<D>
C209	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C210	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C211	87-010-176-020		C-CAP,S 680P-50 J SL
C212	87-010-176-020		C-CAP,S 680P-50 J SL
C213	87-010-382-040		CAP,E 22-25 SME<D>
C213	87-010-401-040		CAP,E 1-50 SME
C214	87-010-382-040		CAP,E 22-25 SME<D>
C214	87-010-401-040		CAP,E 1-50 SME
C215	87-010-318-020		C-CAP,S 47P-50 CH
C216	87-010-318-020		C-CAP,S 47P-50 CH
C217	87-010-380-040		CAP,E 47-16 SME
C218	87-010-197-020		C-CAP,S 0.01-25 B
C219	87-010-196-020		C-CAP,S 0.1-25 F
C220	87-010-370-040		CAP,E 330-6.3 SME
C221	87-010-197-020		C-CAP,S 0.01-25 B
C222	87-010-186-020		C-CAP,S 4700P-50 B
C223	87-016-081-020		C-CAP,S 0.1-16 RK
C228	87-018-209-080		CAP, CER 0.1-50V
C230	87-016-081-020		C-CAP,S 0.1-16 RK
C231	87-018-209-080		CAP, CER 0.1-50V
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-010-403-040		CAP,E 3.3-50 SME
C501	87-016-459-040		CAP,E 470-10 SMG
C502	87-010-197-020		C-CAP,S 0.01-25 B
C503	87-010-263-040		CAP,E 100-10
C504	87-010-196-020		C-CAP,S 0.1-25 F
C505	87-010-196-020		C-CAP,S 0.1-25 F
C506	87-010-196-020		C-CAP,S 0.1-25 F
C507	87-010-196-020		C-CAP,S 0.1-25 F
C508	87-016-459-040		CAP,E 470-10 SMG
C509	87-010-196-020		C-CAP,S 0.1-25 F
C510	87-010-196-020		C-CAP,S 0.1-25 F
C601	87-010-197-020		C-CAP,S 0.01-25 B
C602	87-016-251-040		CAP,E 220-16 SMG
C603	87-010-196-020		C-CAP,S 0.1-25 F
C701	87-010-322-020		C-CAP,S 100P-50 CH
C702	87-010-318-020		C-CAP,S 47P-50 CH
C703	87-010-318-020		C-CAP,S 47P-50 CH
C705	87-010-178-020		C-CAP,S 1000P-50 B
C706	87-018-199-080		CAP, CER 3300P
C901	87-010-260-040		CAP,E 47-25 SME<D>
C902	87-010-196-020		C-CAP,S 0.1-25 F<D>
CN3	86-ZG1-609-010		CONN ASSY,6P
FB1	87-003-223-080		FERRITE BEAD BL02RN2
FB2	87-003-223-080		FERRITE BEAD BL02RN2
FB3	87-003-223-080		FERRITE BEAD BL02RN2
FC1	86-ZG1-605-010		CABLE,FFC 16P
FC2	86-ZG1-608-010		CABLE,FFC 8P
L28	83-XM1-617-080		C-COIL,BK2125HM601
L41	83-XM1-617-080		C-COIL,BK2125HM601
L101	87-003-102-080		COIL, 10UH
L201	87-003-102-080		COIL, 10UH
LED901	87-A40-123-010		LED,SLZ-8128A-01-B<D>
M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
⚠PR1	87-026-689-080		PROTECTOR,1A 60V 491
R101	87-022-363-020		C-RES,S 68K-1/10W F
R102	87-022-363-020		C-RES,S 68K-1/10W F
R103	87-022-363-020		C-RES,S 68K-1/10W F
R104	87-022-363-020		C-RES,S 68K-1/10W F
R105	87-022-365-020		C-RES,S 100K-1/10W F
R106	87-022-365-020		C-RES,S 100K-1/10W F
R420	87-029-060-080		RES,FUSE 33-1/4 W
S601	87-036-109-010		PUSH SWITCH
S602	87-036-109-010		PUSH SWITCH
S603	87-036-109-010		PUSH SWITCH
X201	87-A70-046-010		VIB,XTAL 16.934MHZ
LED C.B			
LED701	87-017-733-080		LED,SEL1250SM
LED702	87-017-350-080		LED,SEL1550CM

MODEL NO. 6ZG-1S

ELECTRICAL MAIN PARTS LIST

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	87-A20-546-010		C-IC,CXD2589Q
	87-A20-592-040		C-IC,M51943 AML
	87-070-305-010		IC,BA6897S
	87-001-982-010		IC,TA7291S
TRANSISTOR			
	89-406-555-080		TR,2SD655 (0.5W)
	87-026-463-080		TR,2SA933S (0.3W)
	89-421-722-380		TR,2SD2172V/W
	89-320-011-080		TR,2SC2001 (15W)
	87-026-223-080		TR,DTC143TK
	89-110-155-080		TR,2SA1015(0.4W)
	87-026-608-080		C-TR,DTC 123 JK
	89-327-125-080		CHIP TR,2SC2712GR<D>
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)
CD MAIN C.B			
C1	87-010-196-020		C-CAP,S 0.1-25 F
C2	87-010-260-080		CAP, ELECT 47-25V
C4	87-010-197-020		C-CAP,S 0.01-25 B
C101	87-010-263-040		CAP,E 100-10
C102	87-010-178-020		C-CAP,S 1000P-50 B
C103	87-010-550-040		CAP,E 100-6.3 GAS
C104	87-010-182-020		C-CAP,S 2200P-50 B
C105	87-010-198-020		C-CAP,S 0.022-25 B
C106	87-016-081-020		C-CAP,S 0.1-16 RK
C107	87-016-081-020		C-CAP,S 0.1-16 RK
C108	87-016-081-020		C-CAP,S 0.1-16 RK
C109	87-010-497-040		CAP,E 4.7-35 GAS
C110	87-010-198-080		CAP, CHIP 0.022
C111	87-010-197-020		C-CAP,S 0.01-25 B
C112	87-010-402-040		CAP,E 2.2-50 SME
C113	87-010-382-040		CAP,E 22-25 SME
C114	87-010-213-020		C-CAP,S 0.015-25 B
C115	87-010-263-040		CAP,E 100-10
C116	87-010-197-020		C-CAP,S 0.01-25 B
C117	87-016-369-020		C-CAP,S 0.033-25 B K
C118	87-010-197-020		C-CAP,S 0.01-25 B
C119	87-016-369-020		C-CAP,S 0.033-25 B K
C120	87-010-197-020		C-CAP,S 0.01-25 B
C121	87-010-494-040		CAP,E 1-50 GAS
C122	87-010-154-020		C-CAP,S 10P-50 CH
C123	87-010-154-020		C-CAP,S 10P-50 CH
C124	87-010-154-020		C-CAP,S 10P-50 CH
C125	87-010-596-020		C-CAP,S 0.047-16 RK
C126	87-010-596-020		C-CAP,S 0.047-16 RK
C127	87-012-140-020		C-CAP,S 470P-50 CH
C128	87-010-596-020		C-CAP,S 0.047-16 RK
C129	87-010-198-020		C-CAP,S 0.022-25 B
C130	87-016-081-020		C-CAP,S 0.1-16 RK
C131	87-010-550-040		CAP,E 100-6.3 GAS
C132	87-010-550-040		CAP,E 100-6.3 GAS
C133	87-012-158-020		C-CAP,S 390P-50 J CH
C150	87-010-145-020		C-CAP,S 1P-50 C CH
C202	87-010-596-020		C-CAP,S 0.047-16 RK
C203	87-010-188-020		C-CAP,S 6800P-50 B
C204	87-012-156-020		C-CAP,S 220P-50 CH
C205	87-018-134-080		CAPACITOR,TC-U 0.01-16
C206	87-010-400-040		CAP,E 0.47-50
C207	87-010-197-020		C-CAP,S 0.01-25 B
C208	87-010-318-020		C-CAP,S 47P-50 CH<D>
C209	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C210	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C211	87-010-176-020		C-CAP,S 680P-50 J SL
C212	87-010-176-020		C-CAP,S 680P-50 J SL
C213	87-010-382-040		CAP,E 22-25 SME<D>
C213	87-010-401-040		CAP,E 1-50 SME
C214	87-010-382-040		CAP,E 22-25 SME<D>
C214	87-010-401-040		CAP,E 1-50 SME
C215	87-010-318-020		C-CAP,S 47P-50 CH
C216	87-010-318-020		C-CAP,S 47P-50 CH
C217	87-010-380-040		CAP,E 47-16 SME
C218	87-010-197-020		C-CAP,S 0.01-25 B
C219	87-010-196-020		C-CAP,S 0.1-25 F
C220	87-010-370-040		CAP,E 330-6.3 SME
C221	87-010-197-020		C-CAP,S 0.01-25 B
C222	87-010-186-020		C-CAP,S 4700P-50 B
C223	87-016-081-020		C-CAP,S 0.1-16 RK
C228	87-018-209-080		CAP, CER 0.1-50V
C230	87-016-081-020		C-CAP,S 0.1-16 RK
C231	87-018-209-080		CAP, CER 0.1-50V
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-010-403-040		CAP,E 3.3-50 SME
C501	87-016-459-040		CAP,E 470-10 SMG
C502	87-010-197-020		C-CAP,S 0.01-25 B
C503	87-010-263-040		CAP,E 100-10
C504	87-010-196-020		C-CAP,S 0.1-25 F
C505	87-010-196-020		C-CAP,S 0.1-25 F
C506	87-010-196-020		C-CAP,S 0.1-25 F
C507	87-010-196-020		C-CAP,S 0.1-25 F
C508	87-016-459-040		CAP,E 470-10 SMG
C509	87-010-196-020		C-CAP,S 0.1-25 F
C510	87-010-196-020		C-CAP,S 0.1-25 F
C601	87-010-197-020		C-CAP,S 0.01-25 B
C602	87-016-251-040		CAP,E 220-16 SMG
C603	87-010-196-020		C-CAP,S 0.1-25 F
C701	87-010-322-020		C-CAP,S 100P-50 CH
C702	87-010-318-020		C-CAP,S 47P-50 CH
C703	87-010-318-020		C-CAP,S 47P-50 CH
C705	87-010-178-020		C-CAP,S 1000P-50 B
C706	87-018-199-080		CAP, CER 3300P
C901	87-010-260-040		CAP,E 47-25 SME<D>
C902	87-010-196-020		C-CAP,S 0.1-25 F<D>
CN3	86-ZG1-609-010		CONN ASSY,6P
FB1	87-003-223-080		FERRITE BEAD BL02RN2
FB2	87-003-223-080		FERRITE BEAD BL02RN2
FB3	87-003-223-080		FERRITE BEAD BL02RN2
FC1	86-ZG1-605-010		CABLE,FFC 16P
FC2	86-ZG1-608-010		CABLE,FFC 8P
L28	83-XM1-617-080		C-COIL,BK2125HM601
L41	83-XM1-617-080		C-COIL,BK2125HM601
L101	87-003-102-080		COIL, 10UH
L201	87-003-102-080		COIL, 10UH
LED901	87-A40-123-010		LED,SLZ-8128A-01-B<D>
M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
⚠PR1	87-026-689-080		PROTECTOR,1A 60V 491
R101	87-022-363-020		C-RES,S 68K-1/10W F
R102	87-022-363-020		C-RES,S 68K-1/10W F
R103	87-022-363-020		C-RES,S 68K-1/10W F
R104	87-022-363-020		C-RES,S 68K-1/10W F
R105	87-022-365-020		C-RES,S 100K-1/10W F
R106	87-022-365-020		C-RES,S 100K-1/10W F
R420	87-029-060-080		RES,FUSE 33-1/4 W
S601	87-036-109-010		PUSH SWITCH
S602	87-036-109-010		PUSH SWITCH
S603	87-036-109-010		PUSH SWITCH
X201	87-A70-046-010		VIB,XTAL 16.934MHZ
LED C.B			
LED701	87-017-733-080		LED,SEL1250SM
LED702	87-017-350-080		LED,SEL1550CM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
LED703	87-017-733-080		LED,SEL1250SM

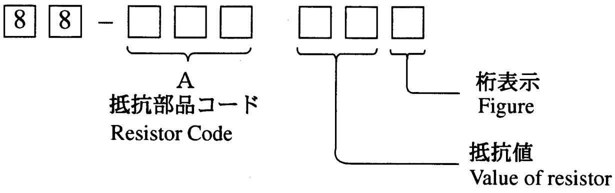
T-T C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C411	87-018-214-080		CAP TC U 0.1-50F
LED411	87-070-288-010		LED,GL380
M401	87-A90-036-010		MOT ASSY,RF-300CA-11
PS401	87-A90-156-010		SNSR,SG-240
Q411	87-A30-031-010		P-TR,PT380F
S401	87-036-109-010		PUSH SWITCH

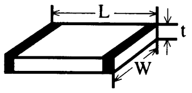
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

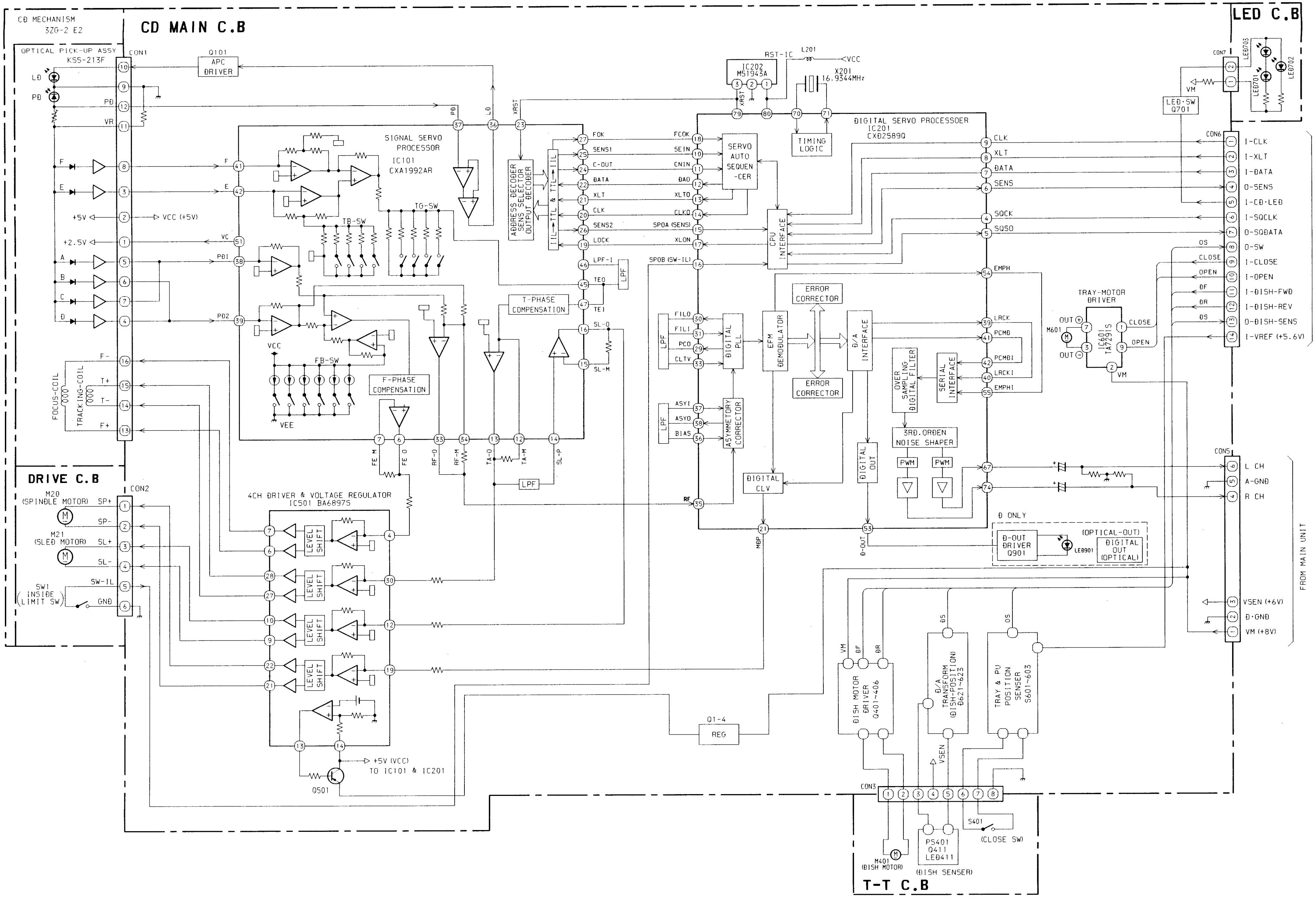
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



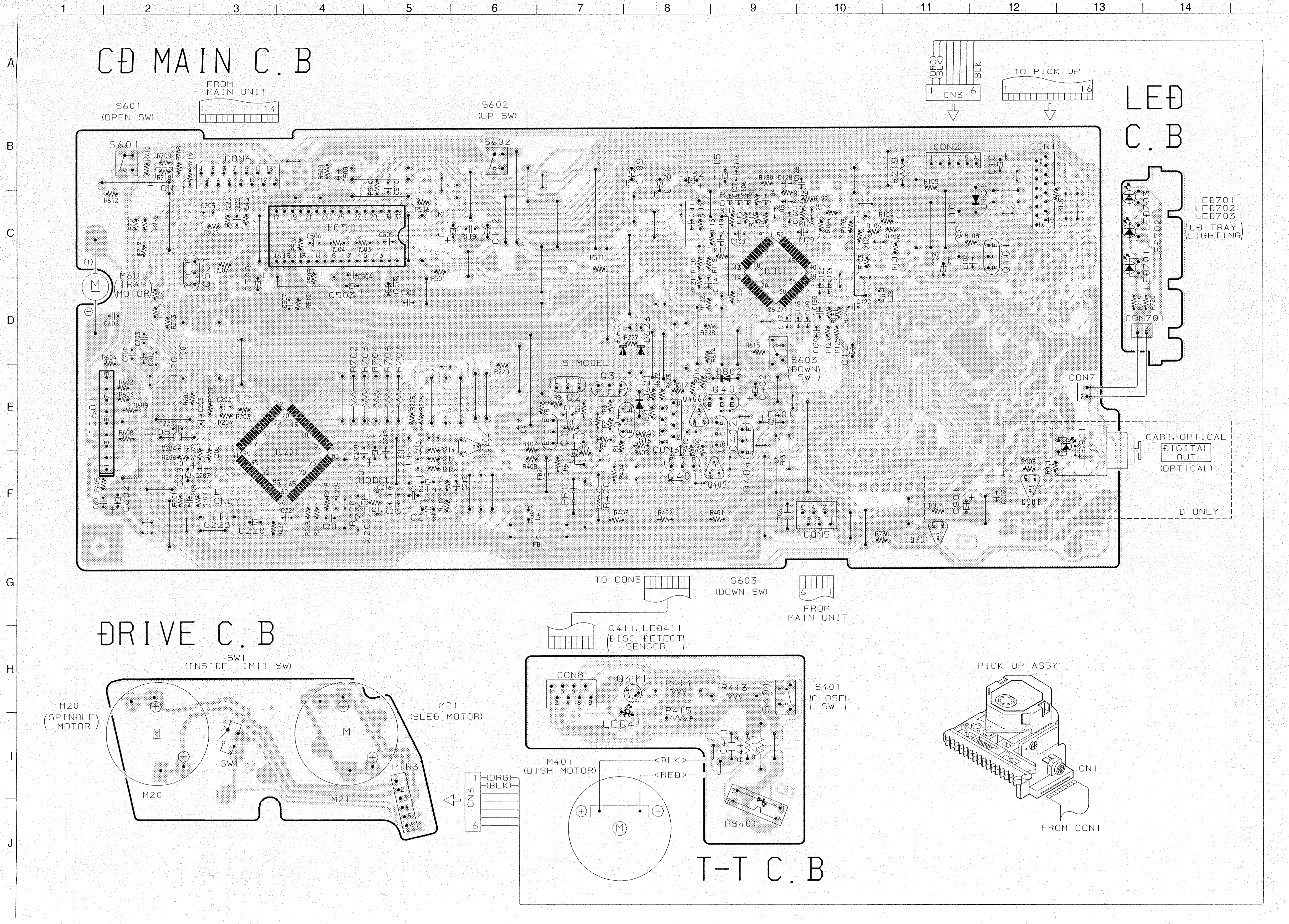
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード :A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

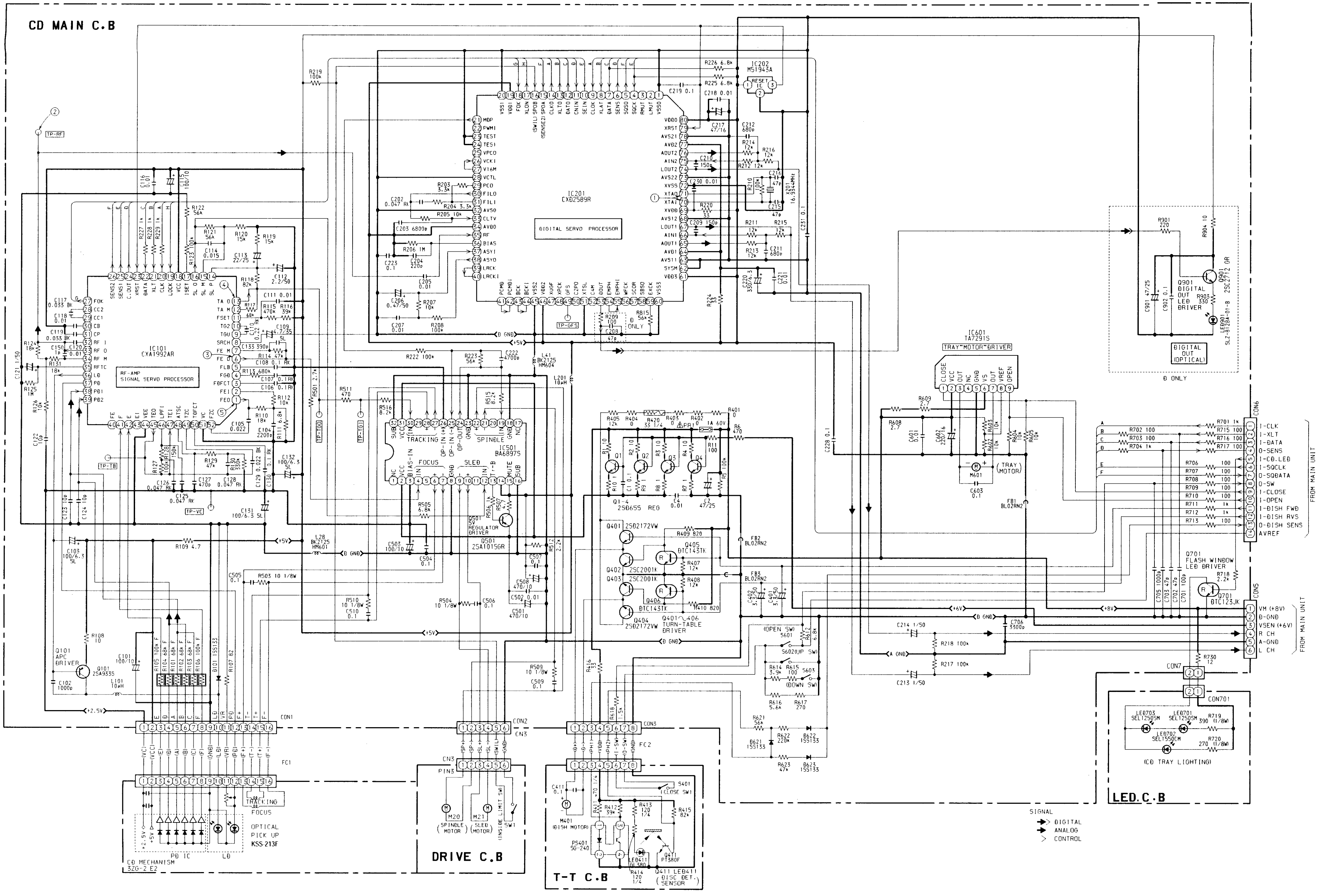
BLOCK DIAGRAM


CD MECHANISM
3ZG-2 E2
CD MAIN C.B
LED C.B
OPTICAL PICK-UP ASSY
KSS-213F
CON1
LD
PD
VR
+5V
VCC (+5V)
+2.5V
F-
T+
T-
F+
FOCUS-COIL
TRACKING-COIL
Q101
APC
DRIVER
SIGNAL SERVO
PROCESSOR
IC101
CXA1992AR
TG-SW
TB-SW
FB-SW
VCC
VEE
F-PHASE
COMPENSATION
T-PHASE
COMPENSATION
LPF
ADDRESS DECODER
SENS SELECTOR
OUTPUT DECODER
IIL→TTL & TTL→IIL
FOK
SENS1
C-OUT
DATA
XLT
CLK
SENS2
LOCK
LPF-I
TEO
TEI
SL-O
SL-M
FE-M
FE O
RF-O
RF-M
TA-O
TA-M
SL-P
XRST
IC202
M51943A
RST-IC
L201
VCC
X201
16.9344MHz
TIMING
LOGIC
DIGITAL SERVO PROCESSOR
IC201
CXD2589Q
FCOK
SEIN
CNIN
DAO
XLTO
CLKO
SPOA (SENS)
XLON
SPOB (SW-IL)
SERVO
AUTO
SEQUEN
-CER
CPU
INTERFACE
FILO
FILI
PCO
CLTV
DIGITAL
PLL
ASYI
ASYO
BIAS
ASYMMETORY
CORRECTOR
EFM
DEMODULATOR
ERROR
CORRECTOR
D/A
INTERFACE
OVER
SAMPLING
DIGITAL FILTER
SERIAL
INTERFACE
3RD. ORDEN
NOISE SHAPER
PWM
DIGITAL
OUT
DIGITAL
CLV
RF
MDP
D-OUT
CLK
XLT
DATA
SENS
SQCK
SQSO
EMPH
LRCK
PCMD
PCMDI
LRCKI
EMPHI
D ONLY
D-OUT
DRIVER
Q901
(OPTICAL-OUT)
LED901
DIGITAL
OUT
(OPTICAL)
CON7
LED703
LED702
LED701
VM
LED-SW
Q701
CON6
I-CLK
I-XLT
I-DATA
O-SENS
I-CD-LED
I-SQCLK
O-SQDATA
O-SW
I-CLOSE
I-OPEN
I-DISH-FWD
I-DISH-REV
O-DISH-SENS
I-VREF (+5.6V)
FROM MAIN UNIT
OS
CLOSE
OPEN
DF
DR
TRAY-MOTOR
DRIVER
M601
OUT⊕
OUT⊖
IC601
TA7291S
CON5
L CH
A-GND
R CH
VSEN (+6V)
D-GND
VM (+8V)
DRIVE C.B
CON2
M20
(SPINDLE MOTOR)
SP+
SP-
M21
(SLED MOTOR)
SL+
SL-
SW1
INSIDE
LIMIT SW
SW-IL
GND
4CH DRIVER & VOLTAGE REGULATOR
IC501 BA6897S
LEVEL
SHIFT
+5V (VCC)
TO IC101 & IC201
Q501
Q1-4
REG
DISH MOTOR
DRIVER
Q401~406
D/A
TRANSFORM
(DISH-POSITION)
Q621~623
TRAY & PU
POSITION
SENSER
S601~603
VSEN
CON3
M401
(DISH MOTOR)
PS401
Q411
LED411
(DISH SENSER)
S401
(CLOSE SW)
T-T C.B

WIRING


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
CD MAIN C.B
FROM MAIN UNIT
S601 (OPEN SW)
S602 (UP SW)
CN3
ORG
BLK
TO PICK UP
LED C.B
LED701
LED702
LED703
(CD TRAY LIGHTING)
CON6
CON2
CON1
CON701
CON7
CON3
CON5
IC501
IC101
IC201
IC202
IC601
M601 (TRAY MOTOR)
F ONLY
D ONLY
S MODEL
U MODEL
S603 (DOWN SW)
CABI. OPTICAL
DIGITAL OUT (OPTICAL)
LED901
Q901
Q701
TO CON3
S603 (DOWN SW)
FROM MAIN UNIT
DRIVE C.B
SW1 (INSIDE LIMIT SW)
M20 (SPINDLE MOTOR)
M21 (SLED MOTOR)
PIN3
Q411, LED411 (DISC DETECT SENSOR)
CON8
R414
R413
R415
S401 (CLOSE SW)
M401 (DISH MOTOR)
BLK
RED
PS401
T-T C.B
PICK UP ASSY
CN1
FROM CON1

SCHEMATIC DIAGRAM


CD MAIN C.B
IC101
CXA1992AR
RF-AMP
SIGNAL SERVO PROCESSOR
IC201
CXD2589R
DIGITAL SERVO PROCESSOR
IC202
M51943A
RESET
IC501
BA6897S
TRACKING
FOCUS
SPINDLE
SLED
IC601
TA7291S
TRAY-MOTOR-DRIVER
Q1-4
2SD655 REG
Q401~406
TURN-TABLE
DRIVER
Q501
25A1015GR
REGULATOR
DRIVER
Q101
2SA933S
APC
DRIVER
Q901
DIGITAL
OUT
LED
DRIVER
DIGITAL
OUT
(OPTICAL)
D ONLY
Q701
FLASH WINDOW
LED DRIVER
X201
16.9344MHz
M601
(TRAY MOTOR)
I-CLK
I-XLT
I-DATA
O-SENS
I-CD.LED
I-SQCLK
O-SQDATA
O-SW
I-CLOSE
I-OPEN
I-DISH FWD
I-DISH RVS
O-DISH SENS
AVREF
FROM MAIN UNIT
VM (+8V)
D-GND
VSEN (+6V)
R CH
A-GND
L CH
FROM MAIN UNIT
CON1
CON2
CON3
CON5
CON6
CON7
CON701
FC1
FC2
CN3
(OPEN SW)
S601
S602UP SW
S603
(DOWN SW)
CD MECHANISM
3ZG-2 E2
OPTICAL
PICK UP
KSS-213F
PD IC
LD
TRACKING
FOCUS
DRIVE C.B
M20
(SPINDLE MOTOR)
M21
(SLED MOTOR)
(INSIDE LIMIT SW)
SW1
T-T C.B
M401
(DISH MOTOR)
PS401
SG-240
S401
(CLOSE SW)
Q411 LED411
(DISC DET. SENSOR)
LED.C.B
LED703
SEL1250SM
LED701
SEL1250SM
LED702
SEL1550CM
(CD TRAY LIGHTING)
SIGNAL
DIGITAL
ANALOG
CONTROL

IC DESCRIPTION

IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	"L" setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at "L" setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.

Pin No.	Pin Name	I/O	Description
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier.
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC, CXD2589Q

Pin No.	Pin Name	I/O	Description
1, 20, 45, 60	VSS	—	GND.
2	LMUT	O	Lch-"0" detect flag.
3	RMUT	O	Rch-"0" detect flag.
4	SQCK	I	Clock input for SQSO read out.
5	SQSO	O	SubQ 80 bit serial output.
6	SENS	O	SENS signal output to CPU.
7	DATA	I	Serial data input from CPU.
8	XLAT	I	Latch input from CPU, Latch serial data at fall down.
9	CLOK	I	Clock input to serial data transfer from CPU.
10	SEIN	I	SENS input from SSP.
11	CNIN	I	Numbers of track jump are counted and input.
12	DATO	O	Serial data output to SSP.
13	XLTO	O	Serial-data latch output to SSP. Latch at fall down.
14	CLKO	O	Clock output for serial data transfer to SSP.
15	SPOA	I	Microcomputer expansion interface. (Input A)
16	SPOB	I	Microcomputer expansion interface. (Input B)
17	XLON	O	Microcomputer expansion interface. (Output)
18	FOK	I	Focus OK input terminal. Used for SENS output and servo-auto sequencer.
19, 46, 61, 80	VDD	—	Power supply. (+5V)
21	MDP	O	Servo control for spindle motor.
22	PWMI	I	External control input for spindle motor.
23	TEST	I	TEST terminal. (Connected to GND)
24	TESI	I	TEST terminal. (Connected to GND)
25	VPCO	O	Charge pump output for extensive EFM PLL.
26	VCKI	I	VCO2 oscillator input for extensive EFM PLL.
27	V16M	O	VCO2 oscillator output for extensive EFM PLL.
28	VCTL	I	VCO2 control voltage input for extensive EFM PLL.
29	PCO	O	Charge pump output for master PLL.
30	FILO	O	Filter (slave = digital PLL) output for master PLL.
31	FILI	I	Filter input for master PLL.
32	AVSS	—	Analog GND.
33	CLTV	I	VCO control voltage input for master.
34	AVDD	—	Analog power. (+5V)
35	RF	I	EFM signal input.
36	BIAS	I	Constant current input to asymmetry circuit.
37	ASYI	I	Comparison voltage input to asymmetry circuit.
38	ASYO	O	EFM full-swing output. (L=VSS, H=VDD)
39	LRCK	O	D/A interface, LR clock output f=FS.
40	LRCKI	I	LR clock input.
41	PCMD	O	D/A interface, serial data output. (2's COMP, MSB first)
42	PCMDI	I	D/A interface, serial data input. (2's COMP, MSB first)

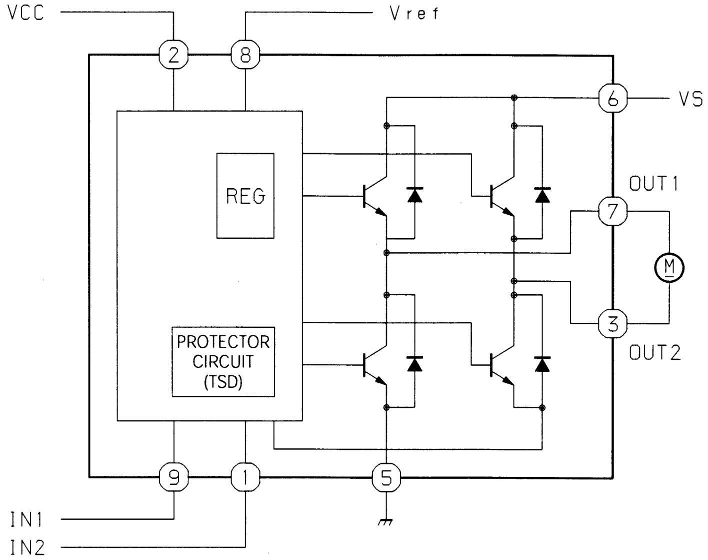
Pin No.	Pin Name	I/O	Description
43	BCK	O	D/A interface bit clock output.
44	BCKI	I	D/A interface bit clock input.
47	XUGF	O	XUGF output, MNT1 or RPCK output by switching command.
48	XPCK	O	XPLCK output, MNT0 output by switching command.
49	GFS	O	GFS output, MNT3 or XRAOF output by switching command.
50	C2PO	O	C2PO output, GTOP output by switching command.
51	XTSL	I	X'tal select input terminal, X'tal: 16.9344MHz = "L" 33.8688MHz = "H".
52	C4M	O	4.2336MHz output, Output 1/4 divided frequency of VCKI at CAV-W mode.
53	DOUT	O	Digital Out connector output signal.
54	EMPH	O	"H" when the playback disc has emphasis. "L" when it does not.
55	EMPHI	I	De-emphasis ON/OFF, "H" when ON, "L" when OFF.
56	WFCK	O	WFCK output.
57	SCOR	O	H output when the subcode sync S0 or S1 is detected.
58	SESO	O	Serial output for SubP-W.
59	EXCK	I	SBSO read out clock input.
62	SYSM	I	Mute input terminal, Active the "H" setting.
63	AVSS	—	Analogue GND.
64	AVDD	—	Analogue power supply. (+5V)
65	AOUT1	O	Lch/analogue output terminal.
66	AINI	I	Lch/OP AMP input terminal.
67	LOUT1	O	Lch/LINE output terminal.
68	AVSS	—	Analogue GND.
69	XVDD	—	Power supply for master clock.
70	XTAI	I	Input terminal for crystal oscillator circuit. Input external master clock from this terminal.
71	XTAO	O	Output terminal for crystal oscillator circuit.
72	XVSS	—	GND terminal for master clock.
73	AVSS	—	Analogue GND.
74	LOUT2	O	Rch/LINE output terminal.
75	AIN2	I	Rch/OP AMP input terminal.
76	AOUT2	O	Rch/analogue output terminal.
77	AVDD	—	Analogue power supply. (+5V)
78	AVSS	—	Analogue GND.
79	XRST	I	Reset system at "L" setting.

Note)

- PCMD is the two's complement output with MSB first.
- GTOP monitors the protection status of the Frame Sync. (H: Sync protection window opened).
- XUGF is the Frame Sync negative pulse which is obtained from the EFM signal. This is the signal before the sync protection.
- XPLCK is the inverted signal of the EFM PLL clock. The PLL works so that the fall-down edge and the changed point of the EFM signal agree.
- GFS is the signal that goes "H" when the Frame Sync and the internally inserted timing agree.
- RFCK is the signal having 136 micro-seconds (during normal speed) that is generated to have the same accuracy as X'tal.
- C2PO is the signal indicating the error status of the data.
- XRAOF is the signal that is generated when the 16k RAM goes outside the jitter margin ±4F.

IC BLOCK DIAGRAM

IC, TA7291S

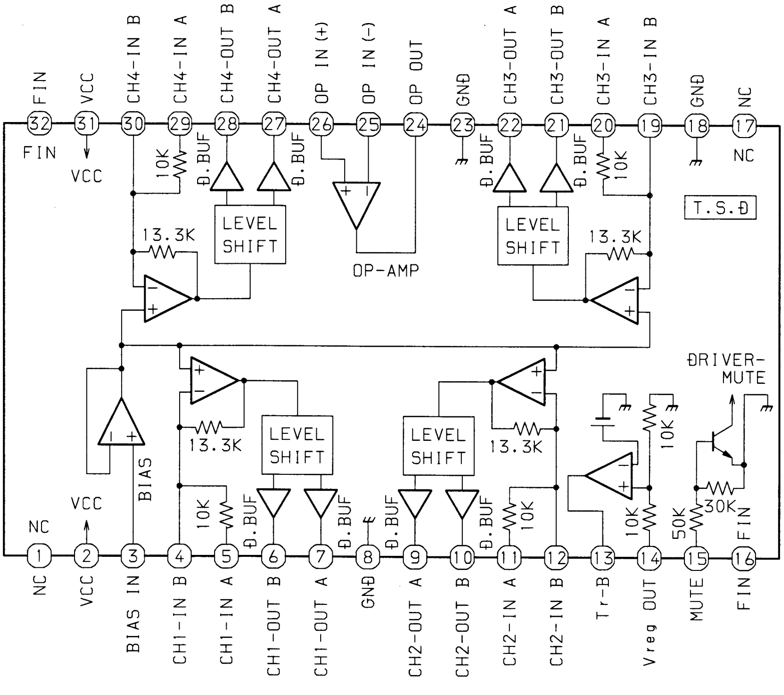

VCC
Vref
2
8
6
VS
REG
OUT1
7
M
3
OUT2
PROTECTOR CIRCUIT (TSD)
9
1
5
IN1
IN2

INPUT		OUTPUT		MOĐE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

∞ : HI IMPEDANCE

NOTE : INPUT "H" ACTIVE

IC, BA6897S


FIN
VCC
CH4-IN B
CH4-IN A
CH4-OUT B
CH4-OUT A
OP IN (+)
OP IN (-)
OP OUT
GNĐ
CH3-OUT A
CH3-OUT B
CH3-IN A
CH3-IN B
GNĐ
NC
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
FIN
VCC
NC
10K
Đ.BUF
Đ.BUF
Đ.BUF
Đ.BUF
10K
LEVEL SHIFT
13.3K
OP-AMP
LEVEL SHIFT
13.3K
T.S.Đ
ĐRIVER-MUTE
13.3K
LEVEL SHIFT
LEVEL SHIFT
13.3K
10K
BIAS
VCC
NC
10K
Đ.BUF
Đ.BUF
Đ.BUF
Đ.BUF
10K
10K
50K
30K
FIN
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
NC
VCC
BIAS IN
CH1-IN B
CH1-IN A
CH1-OUT B
CH1-OUT A
GNĐ
CH2-OUT A
CH2-OUT B
CH2-IN A
CH2-IN B
Tr-B
Vreg OUT
MUTE
FIN

CD TEST MODE

< How to Enter the Test Mode >

Note: Target models of this test mode.
CX-ZR550
CX-ZVR55

While pressing the CD key, insert the AC power cord to AC wall outlet.

< When the Machine Has Entered the Test Mode >

The system is initialized and the main power is turned on. During the test mode, the main power of the CD block is turned on always. The test mode starts with the [Sled mode].

< Types of Test Mode >

[Sled mode]

All displays of the FL tubes light. The optical pickup can be moved by pressing [《] or [》] key.

Pressing the[◻] key establishes the [Focus mode].
Pressing the [▷] key establishes the [Play mode].

Pressing the [《] key moves the sled to outer circumference.
Pressing the [》] key moves the sled to inner circumference.
Pressing OPEN/CLOSE key opens or closes the tray.

[Focus mode]

Lighting of all displays of the FL tubes are turned off and returns to normal display. The focus search is performed in the focus mode regardless whether disc is inserted or not, or focus OK or NG. (Numbers of times of focus search is unlimited. Auto sequence is not used.)
Focus servo is not locked in even the focus is obtained.

Pressing the [▷] key establishes the [Play mode].
Pressing the [《] key decreases the track number to -1.
Pressing the [》] key increases the track number to +1.
Pressing OPEN/CLOSE key opens or closes the tray.
The machine enters the [Sled mode].

[Play mode]

Lighting of all displays of the FL tubes are turned off and returns to normal display. The focus search (numbers of search is unlimited) is performed. When focus comes to in-focus, the focus servo is locked in and the machines enters the normal play mode.
During [Play mode], GFS and sound skipping are not monitored.
When focus becomes out-of-focus, another attempt is made to search for focus.
The tracking servo and the sled servo can be turned on and off by pressing the [▷] key.

Pressing the [◻] key establishes the [Sled mode].
The [▷] display can be turned on and off by pressing the [II] key .

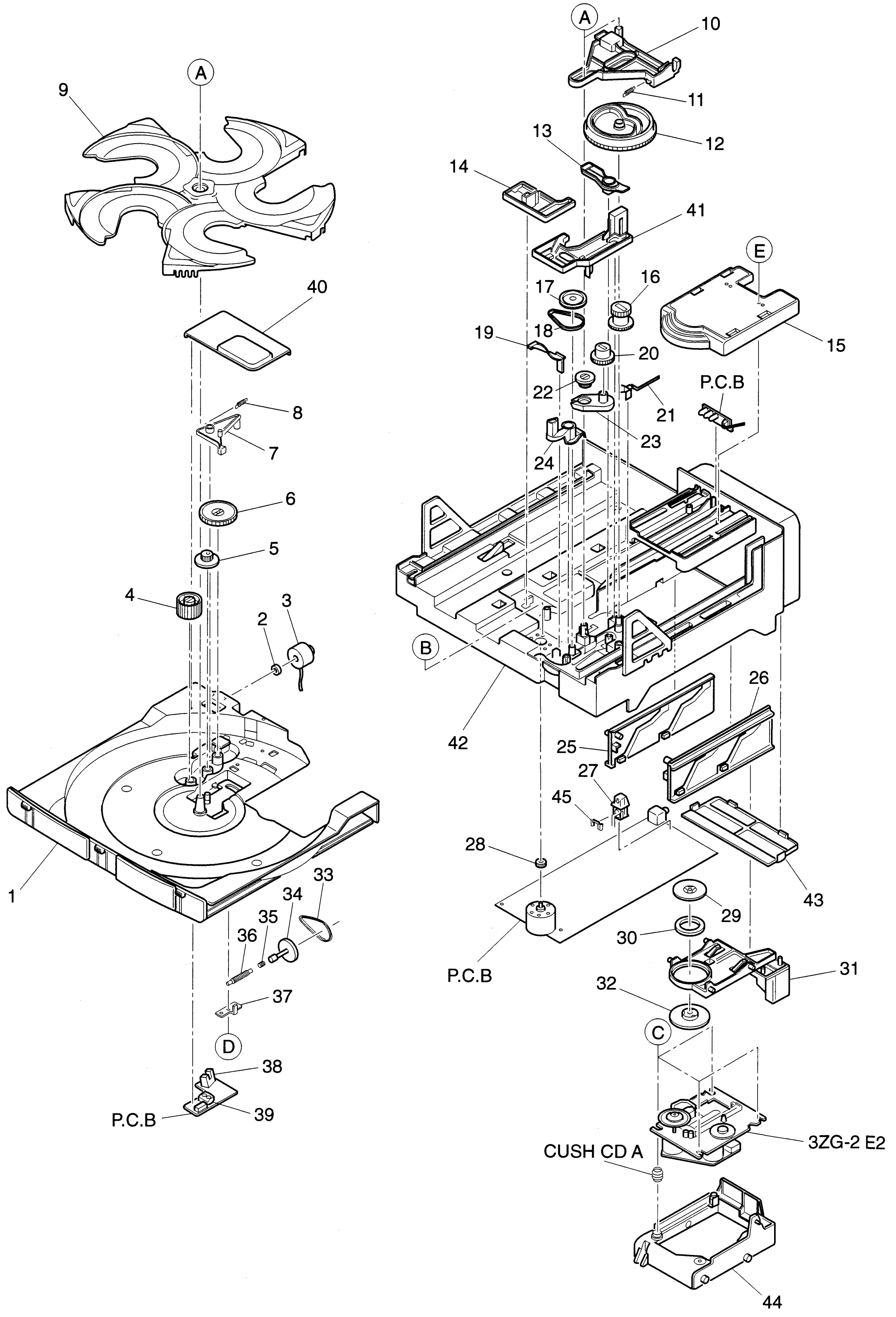
While the [II] display is turned off:
CLV-A Tracking servo: on
Sled servo: on
While the [II] display is turned on:
CLV-A Tracking servo: off
Sled servo: off

Pressing the [《] key decreases the track number to -1.
Pressing the [》] key increases the track number to +1.
Pressing OPEN/CLOSE key opens or closes the tray.
The machine enters the [Sled mode].

< How to Exit the Test Mode >

Remove the AC power cord from power outlet, or turn off the system power.

MECHANICAL EXPLODED VIEW 1/1

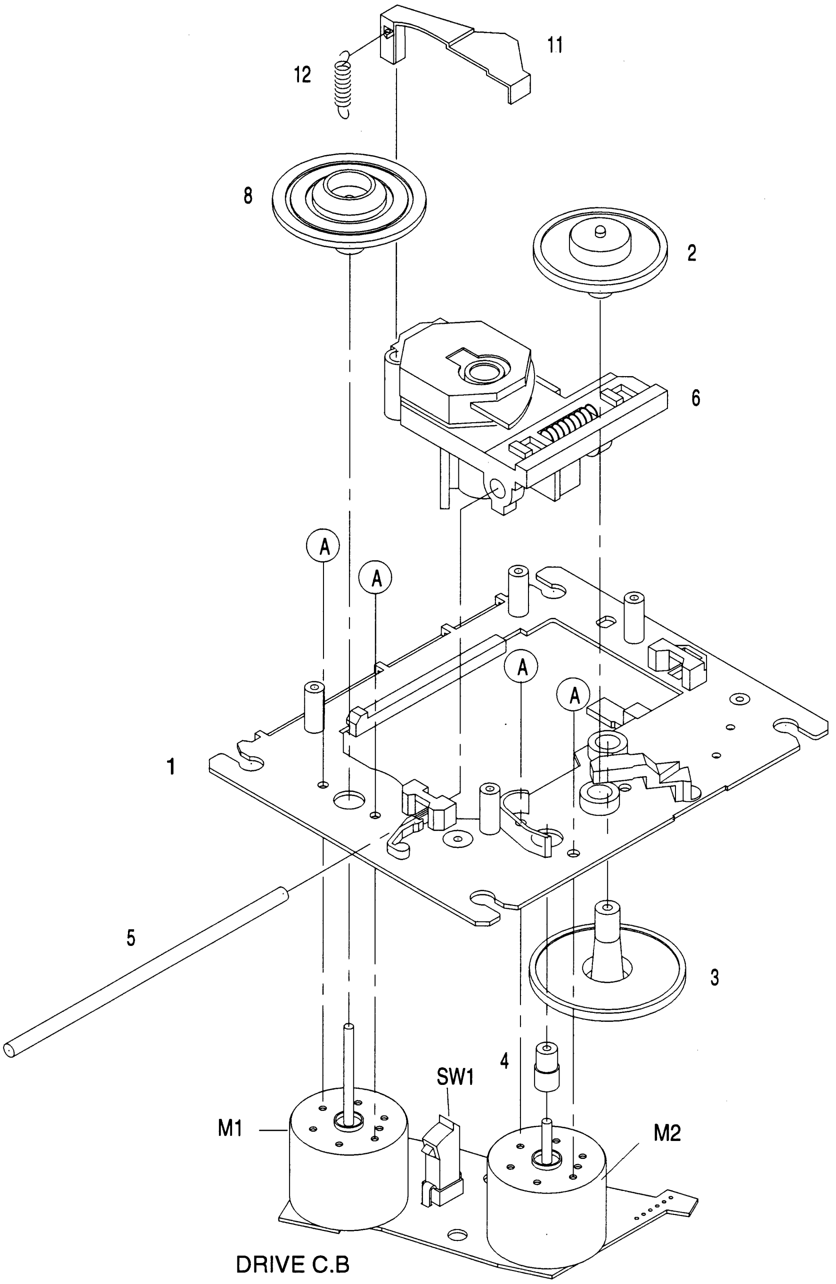

A
9
40
8
7
6
5
4
3
2
1
33
34
35
36
37
D
38
P.C.B
39
A
10
11
12
13
14
41
E
17
16
18
19
20
15
22
21
P.C.B
23
24
B
42
26
25
27
45
28
43
29
30
P.C.B
31
32
C
3ZG-2 E2
CUSH CD A
44

MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZG1-001-310		TRAY,5CD	31	86-ZG1-215-010		HLDR,CHUCK
2	81-ZG1-212-010		PULLY,LOAD MO	32	86-ZG1-238-010		HLDR,MAGNET 6ZG N
3	87-A90-036-010		MOT ASSY,RF-300CA-11	33	86-ZG1-225-010		BELT,SQ1.2-32.9
4	86-ZG1-228-110		GEAR,TT-B	34	86-ZG1-221-010		PULLEY,TT
5	86-ZG1-227-110		GEAR,TT-A	35	86-ZG1-231-010		SPR-C,WORM
6	86-ZG1-223-110		GEAR,WORM-WHEEL TT	36	84-ZG1-256-010		GEAR,WORM N2
7	86-ZG1-224-110		LEVER,TT(*)	37	86-ZG1-232-010		SPR-P,WORM
8	86-ZG1-226-010		SPR-E,LEVER TT	38	86-ZG1-229-010		HLDR,SENSOR
9	86-ZG1-002-210		TURN TABLE,5CD	39	86-ZG1-230-010		HLDR,DISC SENSOR
10	86-ZG1-211-210		JOINT,CAM	40	86-ZG1-003-110		COVER,TRAY
11	86-ZG1-216-010		SPR-E,JT	41	86-ZG1-212-310		SLIDER,LOAD
12	86-ZG1-203-210		GEAR,MAIN CAM	42	86-ZG1-201-210		CHAS,MECHA<S2,S>
13	86-ZG1-213-110		LEVER,LOAD	42	86-ZG1-240-010		CHAS,MECHA T2<S3>
14	86-ZG1-214-110		LEVER,PROTECT	43	86-ZG1-005-110		COVER,CHAS
15	86-ZG1-004-010		REFLECTOR,CD	44	86-ZG1-202-110		HLDR,MECHA
16	86-ZG1-205-110		GEAR,TRAY	45	84-ZG1-261-010		LID,OPTICAL
17	84-ZG1-207-010		PULLEY,RELAY	A	87-078-148-010		VFT2+3-12(F10) BLK
18	84-ZG1-209-010		BELT,SQ1.8-117.7	B	87-251-072-410		U+2.6-5
19	86-ZG1-217-010		LEVER,SW	C	81-ZG1-254-010		S-SCREW,MECH HLDR
20	86-ZG1-206-110		GEAR,RELAY B	D	87-067-579-010		TAPPING SCREW, BVT2+3-8
21	86-ZG1-220-110		SPR-P,LOCK	E	87-067-703-010		TAPPING SCREW, BVT2+3-10
22	86-ZG1-204-110		GEAR,RELAY A				
23	86-ZG1-218-110		PLATE,GEAR				
24	86-ZG1-208-010		LEVER,TRAY				
25	86-ZG1-209-110		SLIDER,CAM L(*)				
26	86-ZG1-210-110		SLIDER,CAM R(*)				
27	84-ZG1-244-310		CABI,OPTICAL<S2>				
28	84-ZG2-228-010		PULLEY,MOT				
29	83-ZG3-211-010		PLATE,DISC				
30	83-ZG3-602-010		RING,MAG				

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-1 E2)



CD MECHANISM PARTS LIST 1/1 (3ZG-1 E2)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-247-210		CHAS ASSY,SHT5
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-227-010		TURN TABLE,C1
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

MODEL NO. 6ZG-1S2

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-546-010		C-IC,CXD2589Q
	87-A20-592-040		C-IC,M51943 AML<D>
	87-001-792-080		IC,NJM2100M<D>
	87-070-305-010		IC,BA6897S<D>
	87-A20-856-010		IC,BA6898S
	87-001-982-010		IC,TA7291S
	86-ZG1-649-010		C-IC,UPD789026GB-510-MTX
TRANSISTOR			
	89-406-555-080		TR,2SD655 (0.5W)
	87-026-245-080		TR,DTC114ES
	87-026-235-080		CHIP-TR,DTC114EK
	87-026-463-080		TR,2SA933S (0.3W)
	89-324-123-080		C-TR,2SC2412K S<D>
	87-026-227-080		CHIP-TR,DTA114EK<D>
	89-421-722-380		TR,2SD2172V/W
	89-320-011-080		TR,2SC2001 (15W)
	87-026-239-080		TR,DTC114TK (0.2W)<D>
	87-026-223-080		TR,DTC143TK
	89-110-155-080		TR,2SA1015(0.4W)<D>
	89-213-292-380		TR,2SB1329QR
	87-026-608-080		C-TR,DTC 123 JK
	87-A30-075-080		C-TR,2SA1235F<D>
	89-327-125-080		CHIP TR,2SC2712GR<D>
DIODE			
	87-A40-348-080		ZENER,MTZJ3.3A
	87-027-583-080		ZENER,HZ9B1L (200MA)
	87-020-465-080		DIODE,1SS133 (110MA)<D>
	87-A40-291-080		DIODE,1N4148 (CPT)
CD MAIN C.B			
C1	87-010-196-080		CHIP CAPACITOR,0.1-25
C2	87-010-260-080		CAP, ELECT 47-25V
C3	87-010-221-040		CAP,E 470-10 SME
C4	87-010-197-020		C-CAP,S 0.01-25 B
C5	87-010-184-020		C-CAP,S 3300P-50 B
C101	87-010-263-040		CAP,E 100-10<D>
C101	87-010-550-040		CAP,E 100-6.3 GAS
C102	87-010-178-020		C-CAP,S 1000P-50 B
C103	87-010-550-040		CAP,E 100-6.3 GAS
C104	87-010-182-020		C-CAP,S 2200P-50 B
C105	87-010-198-020		C-CAP,S 0.022-25 B
C106	87-016-081-080		C-CAP,S 0.1-16 RK
C107	87-016-081-080		C-CAP,S 0.1-16 RK
C108	87-016-081-080		C-CAP,S 0.1-16 RK
C109	87-010-497-040		CAP,E 4.7-35 GAS<D>
C109	87-010-404-040		CAP,E 4.7-50 SME
C110	87-016-081-080		C-CAP,S 0.1-16 RK
C111	87-010-197-020		C-CAP,S 0.01-25 B
C112	87-010-402-040		CAP,E 2.2-50 SME
C113	87-010-382-040		CAP,E 22-25 SME
C114	87-010-213-020		C-CAP,S 0.015-25 B
C115	87-010-263-040		CAP,E 100-10
C116	87-010-197-020		C-CAP,S 0.01-25 B
C117	87-016-369-020		C-CAP,S 0.033-25 B K
C117	87-010-186-020		C-CAP,S 4700P-50 B<D>
C118	87-010-197-020		C-CAP,S 0.01-25 B
C119	87-016-369-020		C-CAP,S 0.033-25 B K
C120	87-010-197-020		C-CAP,S 0.01-25 B
C121	87-010-494-040		CAP,E 1-50 GAS<D>
C121	87-010-401-040		CAP,E 1-50 SME
C122	87-010-154-020		C-CAP,S 10P-50 CH
C123	87-010-154-020		C-CAP,S 10P-50 CH
C124	87-010-154-020		C-CAP,S 10P-50 CH
C125	87-010-596-020		C-CAP,S 0.047-16 RK
C126	87-010-596-020		C-CAP,S 0.047-16 RK
C127	87-012-140-020		C-CAP,S 470P-50 CH
C128	87-010-596-020		C-CAP,S 0.047-16 RK
C129	87-010-198-020		C-CAP,S 0.022-25 B
C130	87-016-081-080		C-CAP,S 0.1-16 RK
C131	87-010-550-040		CAP,E 100-6.3 GAS
C132	87-010-550-040		CAP,E 100-6.3 GAS
C133	87-012-158-020		C-CAP,S 390P-50 J CH
C150	87-010-145-020		C-CAP,S 1P-50 C CH<D>
C202	87-010-596-020		C-CAP,S 0.047-16 RK
C203	87-010-188-020		C-CAP,S 6800P-50 B
C204	87-012-156-020		C-CAP,S 220P-50 CH
C205	87-018-133-080		CAPACITOR,CER 4700P-16V<D>
C205	87-018-134-080		CAPACITOR,TC-U 0.01-16
C206	87-010-400-040		CAP,E 0.47-50
C207	87-010-197-020		C-CAP,S 0.01-25 B
C208	87-010-318-020		C-CAP,S 47P-50 CH<D>
C209	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C210	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C211	87-010-176-020		C-CAP,S 680P-50 J SL
C212	87-010-176-020		C-CAP,S 680P-50 J SL
C213	87-010-400-040		CAP,E 0.47-50
C213	87-010-382-040		CAP,E 22-25 SME<D>
C214	87-010-400-040		CAP,E 0.47-50
C214	87-010-382-040		CAP,E 22-25 SME<D>
C215	87-010-318-020		C-CAP,S 47P-50 CH
C216	87-010-318-020		C-CAP,S 47P-50 CH
C217	87-010-101-040		CAP,E 220-16 SME
C217	87-010-380-040		CAP,E 47-16 SME<D>
C218	87-010-197-020		C-CAP,S 0.01-25 B
C219	87-010-196-020		C-CAP,S 0.1-25 F
C220	87-010-370-040		CAP,E 330-6.3 SME
C221	87-010-197-080		CAP, CHIP 0.01 DM
C222	87-010-186-020		C-CAP,S 4700P-50 B
C223	87-016-081-020		C-CAP,S 0.1-16 RK
C224	87-010-805-080		CAP, S 1-16
C228	87-018-134-080		CAPACITOR,TC-U 0.01-16
C230	87-018-209-080		CAP, CER 0.1-50V<D>
C231	87-018-209-080		CAP, CER 0.1-50V<D>
C231	87-018-134-080		CAPACITOR,TC-U 0.01-16
C301	87-010-101-080		CAP, ELECT 220-16<D>
C302	87-010-263-080		CAP, ELECT 100-10V<D>
C305	87-010-318-020		C-CAP,S 47P-50 CH<D>
C306	87-010-318-020		C-CAP,S 47P-50 CH<D>
C307	87-010-405-080		CAP, ELECT 10-50V<D>
C308	87-010-405-080		CAP, ELECT 10-50V<D>
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-010-403-040		CAP,E 3.3-50 SME
C501	87-010-555-040		CAP,E 100-10 GAS
C501	87-016-459-040		CAP,E 470-10 SMG<D>
C502	87-010-197-020		C-CAP,S 0.01-25 B
C503	87-010-263-040		CAP,E 100-10<D>
C503	87-010-555-040		CAP,E 100-10 GAS
C504	87-010-196-020		C-CAP,S 0.1-25 F
C505	87-010-196-020		C-CAP,S 0.1-25 F
C506	87-010-196-020		C-CAP,S 0.1-25 F
C507	87-010-196-020		C-CAP,S 0.1-25 F
C508	87-010-221-040		CAP,E 470-10 SME
C508	87-016-459-040		CAP,E 470-10 SMG<D>
C509	87-010-196-020		C-CAP,S 0.1-25 F
C510	87-010-196-020		C-CAP,S 0.1-25 F
C511	87-010-221-040		CAP,E 470-10 SME
C512	87-010-197-020		C-CAP,S 0.01-25 B
C601	87-010-197-020		C-CAP,S 0.01-25 B
C602	87-016-251-040		CAP,E 220-16 SMG<D>
C602	87-010-385-010		CAP,E 220-25
C603	87-010-196-020		C-CAP,S 0.1-25 F
C701	87-010-322-020		C-CAP,S 100P-50 CH<D>
C702	87-010-318-020		C-CAP,S 47P-50 CH<D>

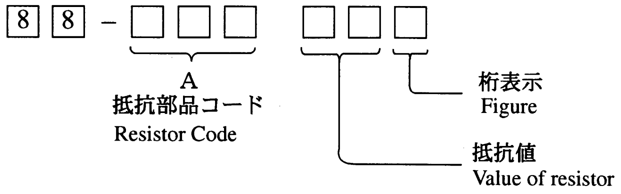
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C703	87-010-318-020		C-CAP,S 47P-50 CH<D>
C705	87-010-178-020		C-CAP,S 1000P-50 B<D>
C705	87-010-322-020		C-CAP,S 100P-50 CH
C706	87-018-209-080		CAP, CER 0.1-50V<D>
C801	87-010-263-040		CAP,E 100-10
C802	87-010-197-020		C-CAP,S 0.01-25 B
C803	87-010-318-020		C-CAP,S 47P-50 CH
C804	87-010-318-020		C-CAP,S 47P-50 CH
C807	87-010-318-020		C-CAP,S 47P-50 CH
C808	87-010-318-020		C-CAP,S 47P-50 CH
C809	87-010-318-020		C-CAP,S 47P-50 CH
C810	87-010-318-020		C-CAP,S 47P-50 CH
C901	87-010-260-080		CAP, ELECT 47-25V<D>
C901	87-010-260-040		CAP,E 47-25 SME<D>
C902	87-010-196-020		C-CAP,S 0.1-25 F<D>
C902	87-010-196-080		CHIP CAPACITOR,0.1-25<D>
CN2	86-ZG1-609-010		CONN ASSY,6P
CON1	87-A60-424-010		CONN,16P V TOC-B
CON2	87-009-034-010		CONN,6P PH V
CON3	87-A60-133-010		CONN,8P V FE
CON5	87-A60-154-010		CONN,6P H FE
CON6	87-099-033-010		16P 6216 H<D>
CON6	87-A60-160-010		CONN,12P H FE
CON301	87-009-346-010		CONN,3P PH H<D>
CON302	87-009-350-010		CONN,7P PH H<D>
FB9	87-A50-192-080		C-COIL,S BLM21P300S
FB50	87-A50-192-080		C-COIL,S BLM21P300S
FB75	87-008-372-080		FILTER, EMI BL OIRNI
FB84	87-008-372-080		FILTER, EMI BL OIRNI
FB90	87-003-223-010		FERRITE BEAD BLO2RN2
FB94	87-003-223-010		FERRITE BEAD BLO2RN2
FB101	83-XM1-617-080		C-COIL,BK2125HM601
FB301	87-008-372-080		FILTER, EMI BL OIRNI<D>
FB401	87-008-372-080		FILTER, EMI BL OIRNI<D>
FC1	86-ZG1-605-010		CABLE,FFC 16P

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
FC2	86-ZG1-667-010		F-CABLE,8P 1.25 175MM BLACK
L31	87-003-102-080		COIL, 10UH
L101	87-003-102-080		COIL, 10UH
L201	87-003-102-080		COIL, 10UH<D>
LED901	87-A40-123-010		LED,SLZ-8128A-01-B<D>
M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R101	87-022-363-020		C-RES,S 68K-1/10W F
R102	87-022-363-020		C-RES,S 68K-1/10W F
R103	87-022-363-020		C-RES,S 68K-1/10W F
R104	87-022-363-020		C-RES,S 68K-1/10W F
R105	87-022-365-020		C-RES,S 100K-1/10W F
R106	87-022-365-020		C-RES,S 100K-1/10W F
R301	87-025-337-080		RESISTOR, 1/4W 47<D>
R420	87-029-060-080		RES,FUSE 33-1/4 W
S601	87-036-109-010		PUSH SWITCH
S602	87-036-109-010		PUSH SWITCH
S603	87-036-109-010		PUSH SWITCH
X201	87-A70-046-010		VIB,XTAL 16.934MHZ
X801	87-A70-075-080		VIB,CER 4.19MHZ CRHF
LED C.B			
LED701	87-017-733-080		LED,SEL1250SM
LED702	87-017-350-080		LED,SEL1550CM
LED703	87-017-733-080		LED,SEL1250SM
T-T C.B			
C411	87-018-214-080		CAP TC U 0.1-50F
CON8	87-A60-156-010		CONN,8P H FE
LED411	87-070-288-010		LED,GL380
M401	87-A90-036-010		MOT ASSY,RF-300CA-11
PS401	87-A90-156-010		SNSR,SG-240
Q411	87-A30-031-010		P-TR,PT380F
S401	87-036-109-010		PUSH SWITCH

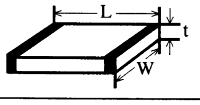
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



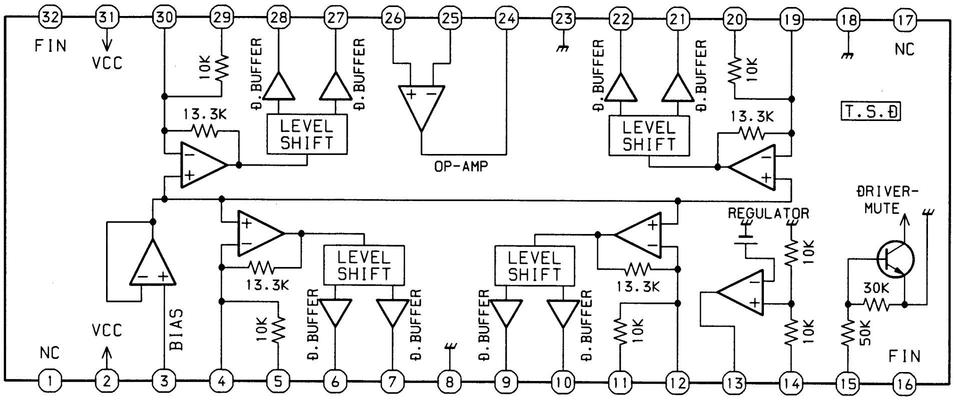
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード :A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

Refer to the following pages for the common section.

- ■ IC DESCRIPTION .... See page 17
- ■ MECHANICAL EXPLODED VIEW .... See page 23
- ■ MECHANICAL PARTS LIST .... See page 24
- ■ CD MECHANISM EXPLODED VIEW .... See page 25
- ■ CD MECHANISM PARTS LIST .... See page 25

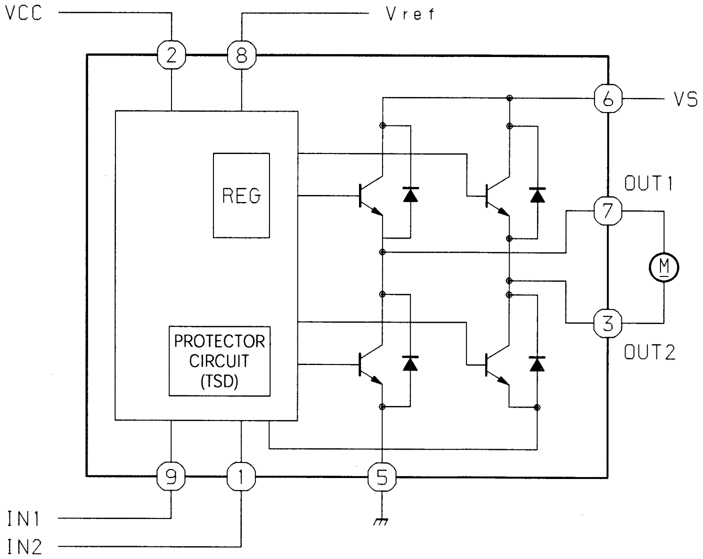
IC BLOCK DIAGRAM
IC, BA6898S



FIN
VCC
10K
D.BUFFER
LEVEL SHIFT
13.3K
OP-AMP
T.S.D
REGULATOR
DRIVER-MUTE
30K
50K
BIAS
NC
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

T.S.D:Thermal shift down circuit
D.BUFFER:Drive Buffer

IC, TA7291S

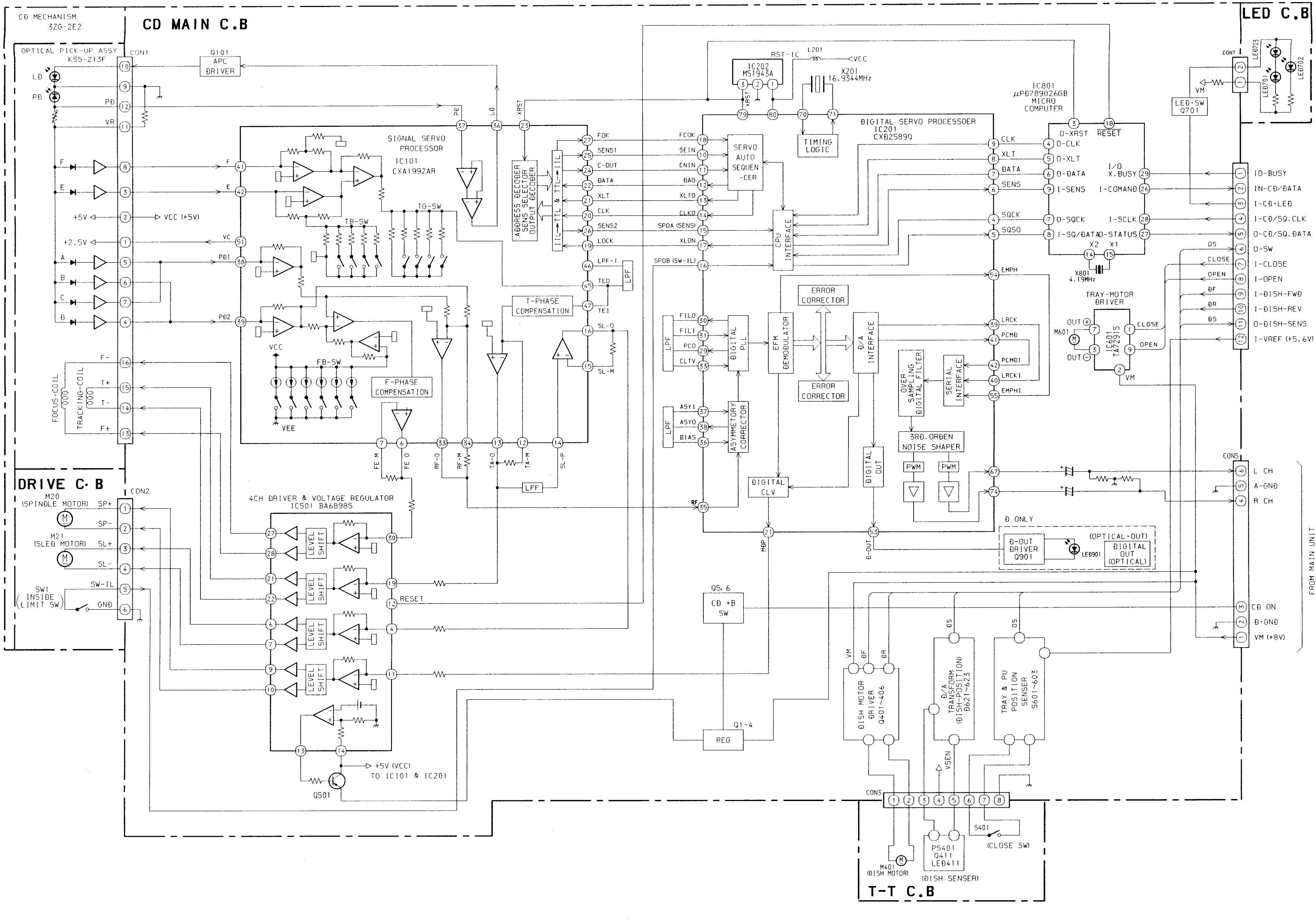


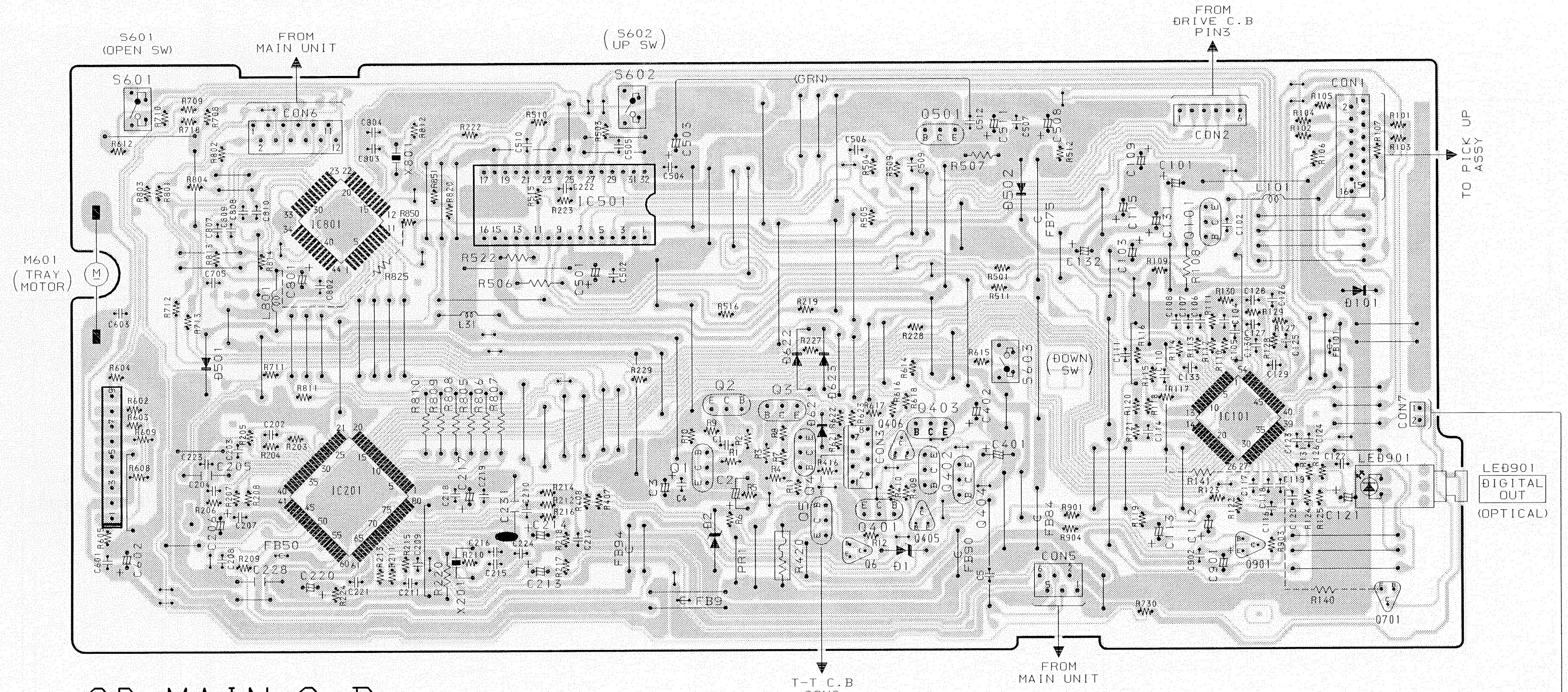
VCC
Vref
VS
OUT1
OUT2
REG
PROTECTOR CIRCUIT (TSD)
M
IN1
IN2
2
8
6
7
3
9
1
5

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

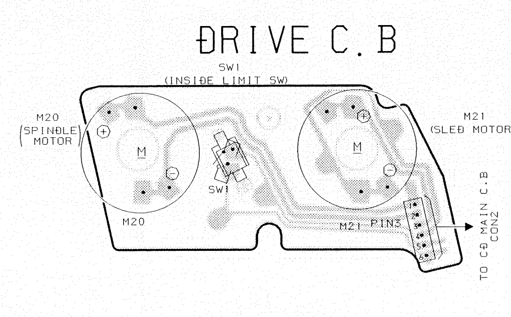
∞ : HI IMPEDANCE
NOTE : INPUT "H" ACTIVE

BLOCK DIAGRAM

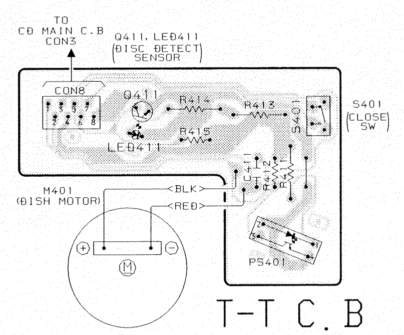

CD MECHANISM
3ZG-2E2
CD MAIN C.B
LED C.B
OPTICAL PICK-UP ASSY
KSS-213F
CON1
LD
PD
VR
F
E
+5V
VCC (+5V)
+2.5V
VC
A
B
C
D
PD1
PD2
FOCUS-COIL
TRACKING-COIL
F-
T+
T-
F+
Q101
APC
DRIVER
SIGNAL SERVO
PROCESSOR
IC101
CXA1992AR
TB-SW
TG-SW
FB-SW
VCC
VEE
F-PHASE
COMPENSATION
T-PHASE
COMPENSATION
ADDRESS DECODER
SENS SELECTOR
OUTPUT DECODER
TTL→IIL
IIL→TTL
XRST
FOK
SENS1
C-OUT
DATA
XLT
CLK
SENS2
LOCK
LPF-I
TED
TEI
SL-O
SL-M
LPF
FE M
FE O
RF-O
RF-M
TA-O
TA-M
SL-P
DRIVE C·B
CON2
M20
(SPINDLE MOTOR)
SP+
SP-
M21
(SLED MOTOR)
SL+
SL-
SW1
(INSIDE LIMIT SW)
SW-IL
GND
4CH DRIVER & VOLTAGE REGULATOR
IC501 BA6898S
LEVEL SHIFT
RESET
+5V (VCC)
TO IC101 & IC201
Q501
RST-IC
L201
VCC
IC202
M51943A
X201
16.9344MHz
TIMING
LOGIC
DIGITAL SERVO PROCESSOER
IC201
CXD2589Q
FCOK
SEIN
CNIN
DAO
XLTO
CLKO
SPOA (SENS)
XLON
SPOB (SW-IL)
SERVO
AUTO
SEQUEN
-CER
CPU
INTERFACE
FILO
FILI
PCO
CLTV
DIGITAL
PLL
EFM
DEMODULATOR
ERROR
CORRECTOR
D/A
INTERFACE
ASYI
ASYO
BIAS
ASYMMETORY
CORRECTOR
OVER
SAMPLING
DIGITAL FILTER
SERIAL
INTERFACE
3RD. ORDEN
NOISE SHAPER
PWM
DIGITAL
OUT
DIGITAL
CLV
RF
MDP
D-OUT
EMPH
LRCK
PCMD
PCMDI
LRCKI
EMPHI
CLK
XLT
DATA
SENS
SQCK
SQSO
IC801
μPD789026GB
MICRO
COMPUTER
O-XRST
RESET
O-CLK
O-XLT
O-DATA
I-SENS
O-SQCK
I-SQ/DATA
I/O
X.BUSY
I-COMAND
I-SCLK
O-STATUS
X2
X1
X801
4.19MHz
TRAY-MOTOR
DRIVER
IC601
TA7291S
M601
OUT⊕
OUT⊖
CLOSE
OPEN
VM
D ONLY
D-OUT
DRIVER
Q901
LED901
(OPTICAL-OUT)
DIGITAL
OUT
(OPTICAL)
CON7
LED703
LED701
LED702
LED·SW
Q701
IO-BUSY
IN-CD/DATA
I-CD·LED
I-CD/SQ.CLK
O-CD/SQ.DATA
O-SW
I-CLOSE
I-OPEN
I-DISH-FWD
I-DISH-REV
O-DISH-SENS
I-VREF (+5.6V)
DS
DF
DR
FROM MAIN UNIT
CON5
L CH
A-GND
R CH
CD ON
D·GND
VM (+8V)
Q5, 6
CD +B
SW
Q1-4
REG
DISH MOTOR
DRIVER
Q401~406
D/A
TRANSFORM
(DISH-POSITION)
D621~623
VSEN
TRAY & PU
POSITION
SENSER
S601~603
CON3
M401
(DISH MOTOR)
PS401
Q411
LED411
(DISH SENSER)
S401
(CLOSE SW)
T-T C.B


S601
(OPEN SW)
FROM
MAIN UNIT
(S602
UP SW)
FROM
DRIVE C.B
PIN3
TO PICK UP ASSY
M601
(TRAY
MOTOR)
CON6
CON1
CON2
CON5
CON7
IC801
IC501
IC201
IC101
X801
X201
Q501
Q101
Q2
Q3
Q401
Q402
Q403
Q404
Q405
Q406
Q901
Q701
D501
D502
D101
(GRN)
(DOWN
SW)
S603
LED901
DIGITAL
OUT
(OPTICAL)
FB50
FB75
FB84
FB89
FB90
FB94
L801
L31
L101
T-T C.B
CON8
FROM
MAIN UNIT

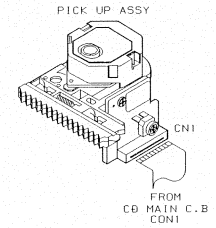
CD MAIN C.B

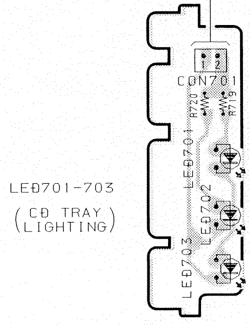

SW1
(INSIDE LIMIT SW)
M20
(SPINDLE
MOTOR)
M21
(SLED MOTOR)
M
M
SW1
M20
M21 PIN3
TO CD MAIN C.B
CON2

DRIVE C.B


TO
CD MAIN C.B
CON3
Q411, LED411
(DISC DETECT
SENSOR)
CON8
Q411
R414
R413
R415
LED411
S401
(CLOSE
SW)
M401
(DISH MOTOR)
BLK
RED
M
C411
R412
R411
PS401

T-T C.B


PICK UP ASSY
CN1
FROM
CD MAIN C.B
CON1


CON701
R720
R719
LED701
LED702
LED703
LED701-703
(CD TRAY
LIGHTING)

LED C.B

Refer to the following pages for the common section.

- IC DESCRIPTION .... See page 17
- IC BLOCK DIAGRAM .... See page 21
- MECHANICAL EXPLODED VIEW .... See page 23
- MECHANICAL PARTS LIST .... See page 24
- CD MECHANISM EXPLODED VIEW .... See page 25
- CD MECHANISM PARTS LIST .... See page 25

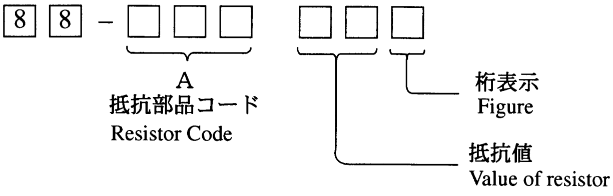
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C703	87-010-318-020		C-CAP,S 47P-50 CH
C705	87-010-178-020		C-CAP,S 1000P-50 B
C705	87-010-322-020		C-CAP,S 100P-50 CH<D>
C706	87-018-209-080		CAP, CER 0.1-50V
C801	87-010-263-040		CAP,E 100-10<D>
C802	87-010-197-020		C-CAP,S 0.01-25 B<D>
C803	87-010-318-020		C-CAP,S 47P-50 CH<D>
C804	87-010-318-020		C-CAP,S 47P-50 CH<D>
C807	87-010-318-020		C-CAP,S 47P-50 CH<D>
C808	87-010-318-020		C-CAP,S 47P-50 CH<D>
C809	87-010-318-020		C-CAP,S 47P-50 CH<D>
C810	87-010-318-020		C-CAP,S 47P-50 CH<D>
C901	87-010-260-080		CAP, ELECT 47-25V<D>
C901	87-010-260-040		CAP,E 47-25 SME<D>
C902	87-010-196-020		C-CAP,S 0.1-25 F<D>
C902	87-010-196-080		CHIP CAPACITOR,0.1-25<D>
CN2	86-ZG1-609-010		CONN ASSY,6P
CON1	87-A60-424-010		CONN,16P V TOC-B
CON2	87-009-034-010		CONN,6P PH V
CON3	87-A60-133-010		CONN,8P V FE
CON5	87-A60-154-010		CONN,6P H FE
CON6	87-099-033-010		16P 6216 H
CON6	87-A60-160-010		CONN,12P H FE<D>
CON301	87-009-346-010		CONN,3P PH H
CON302	87-009-350-010		CONN,7P PH H
FB9	87-A50-192-080		C-COIL,S BLM21P300S<D>
FB50	87-A50-192-080		C-COIL,S BLM21P300S<D>
FB75	87-008-372-080		FILTER, EMI BL OIRNI<D>
FB84	87-008-372-080		FILTER, EMI BL OIRNI<D>
FB90	87-003-223-010		FERRITE BEAD BLO2RN2<D>
FB94	87-003-223-010		FERRITE BEAD BLO2RN2<D>
FB101	83-XM1-617-080		C-COIL,BK2125HM601<D>
FB301	87-008-372-080		FILTER, EMI BL OIRNI
FB401	87-008-372-080		FILTER, EMI BL OIRNI
FC1	86-ZG1-605-010		CABLE,FFC 16P

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
FC2	86-ZG1-667-010		F-CABLE,8P 1.25 175MM BLACK
L31	87-003-102-080		COIL, 10UH<D>
L101	87-003-102-080		COIL, 10UH
L201	87-003-102-080		COIL, 10UH
LED901	87-A40-123-010		LED,SLZ-8128A-01-B<D>
M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R101	87-022-363-020		C-RES,S 68K-1/10W F
R102	87-022-363-020		C-RES,S 68K-1/10W F
R103	87-022-363-020		C-RES,S 68K-1/10W F
R104	87-022-363-020		C-RES,S 68K-1/10W F
R105	87-022-365-020		C-RES,S 100K-1/10W F
R106	87-022-365-020		C-RES,S 100K-1/10W F
R301	87-025-337-080		RESISTOR, 1/4W 47
R420	87-029-060-080		RES,FUSE 33-1/4 W<D>
S601	87-036-109-010		PUSH SWITCH
S602	87-036-109-010		PUSH SWITCH
S603	87-036-109-010		PUSH SWITCH
X201	87-A70-046-010		VIB,XTAL 16.934MHZ
X801	87-A70-075-080		VIB,CER 4.19MHZ CRHF<D>
LED C.B			
LED701	87-017-733-080		LED,SEL1250SM
LED702	87-017-350-080		LED,SEL1550CM
LED703	87-017-733-080		LED,SEL1250SM
T-T C.B			
C411	87-018-214-080		CAP TC U 0.1-50F
CON8	87-A60-156-010		CONN,8P H FE
LED411	87-070-288-010		LED,GL380
M401	87-A90-036-010		MOT ASSY,RF-300CA-11
PS401	87-A90-156-010		SNSR,SG-240
Q411	87-A30-031-010		P-TR,PT380F
S401	87-036-109-010		PUSH SWITCH

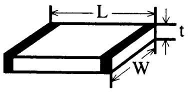
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード :A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

MODEL NO. 6ZG-1S3

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-546-010		C-IC,CXD2589Q
	87-A20-592-040		C-IC,M51943 AML
	87-001-792-080		IC,NJM2100M
	87-070-305-010		IC,BA6897S
	87-A20-856-010		IC,BA6898S<D>
	87-001-982-010		IC,TA7291S
	86-ZG1-649-010		C-IC,UPD789026GB-510-MTX<D>
TRANSISTOR			
	89-406-555-080		TR,2SD655 (0.5W)<D>
	87-026-245-080		TR,DTC114ES<D>
	87-026-235-080		CHIP-TR,DTC114EK<D>
	87-026-463-080		TR,2SA933S (0.3W)
	89-324-123-080		C-TR,2SC2412K S
	87-026-227-080		CHIP-TR,DTA114EK
	89-421-722-380		TR,2SD2172V/W
	89-320-011-080		TR,2SC2001 (15W)
	87-026-239-080		TR,DTC114TK (0.2W)
	87-026-223-080		TR,DTC143TK<D>
	89-110-155-080		TR,2SA1015(0.4W)
	89-213-292-380		TR,2SB1329QR<D>
	87-026-608-080		C-TR,DTC 123 JK
	87-A30-075-080		C-TR,2SA1235F<D>
	89-327-125-080		CHIP TR,2SC2712GR<D>
DIODE			
	87-A40-348-080		ZENER,MTZJ3.3A<D>
	87-027-583-080		ZENER,HZ9B1L (200MA)<D>
	87-020-465-080		DIODE,1SS133 (110MA)
	87-A40-291-080		DIODE,1N4148 (CPT)<D>
CD MAIN C.B			
C1	87-010-196-080		CHIP CAPACITOR,0.1-25<D>
C2	87-010-260-080		CAP, ELECT 47-25V<D>
C3	87-010-221-040		CAP,E 470-10 SME<D>
C4	87-010-197-020		C-CAP,S 0.01-25 B<D>
C5	87-010-184-020		C-CAP,S 3300P-50 B<D>
C101	87-010-263-040		CAP,E 100-10
C101	87-010-550-040		CAP,E 100-6.3 GAS<D>
C102	87-010-178-020		C-CAP,S 1000P-50 B
C103	87-010-550-040		CAP,E 100-6.3 GAS
C104	87-010-182-020		C-CAP,S 2200P-50 B
C105	87-010-198-020		C-CAP,S 0.022-25 B
C106	87-016-081-080		C-CAP,S 0.1-16 RK
C107	87-016-081-080		C-CAP,S 0.1-16 RK
C108	87-016-081-080		C-CAP,S 0.1-16 RK
C109	87-010-497-040		CAP,E 4.7-35 GAS
C109	87-010-404-040		CAP,E 4.7-50 SME<D>
C110	87-016-081-080		C-CAP,S 0.1-16 RK
C111	87-010-197-020		C-CAP,S 0.01-25 B
C112	87-010-402-040		CAP,E 2.2-50 SME
C113	87-010-382-040		CAP,E 22-25 SME
C114	87-010-213-020		C-CAP,S 0.015-25 B
C115	87-010-263-040		CAP,E 100-10
C116	87-010-197-020		C-CAP,S 0.01-25 B
C117	87-016-369-020		C-CAP,S 0.033-25 B K<D>
C117	87-010-186-020		C-CAP,S 4700P-50 B
C118	87-010-197-020		C-CAP,S 0.01-25 B
C119	87-016-369-020		C-CAP,S 0.033-25 B K
C120	87-010-197-020		C-CAP,S 0.01-25 B
C121	87-010-494-040		CAP,E 1-50 GAS
C121	87-010-401-040		CAP,E 1-50 SME<D>
C122	87-010-154-020		C-CAP,S 10P-50 CH
C123	87-010-154-020		C-CAP,S 10P-50 CH
C124	87-010-154-020		C-CAP,S 10P-50 CH
C125	87-010-596-020		C-CAP,S 0.047-16 RK
C126	87-010-596-020		C-CAP,S 0.047-16 RK
C127	87-012-140-020		C-CAP,S 470P-50 CH
C128	87-010-596-020		C-CAP,S 0.047-16 RK
C129	87-010-198-020		C-CAP,S 0.022-25 B
C130	87-016-081-080		C-CAP,S 0.1-16 RK
C131	87-010-550-040		CAP,E 100-6.3 GAS
C132	87-010-550-040		CAP,E 100-6.3 GAS
C133	87-012-158-020		C-CAP,S 390P-50 J CH
C150	87-010-145-020		C-CAP,S 1P-50 C CH
C202	87-010-596-020		C-CAP,S 0.047-16 RK
C203	87-010-188-020		C-CAP,S 6800P-50 B
C204	87-012-156-020		C-CAP,S 220P-50 CH
C205	87-018-133-080		CAPACITOR,CER 4700P-16V
C205	87-018-134-080		CAPACITOR,TC-U 0.01-16<D>
C206	87-010-400-040		CAP,E 0.47-50
C207	87-010-197-020		C-CAP,S 0.01-25 B
C208	87-010-318-020		C-CAP,S 47P-50 CH<D>
C209	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C210	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C211	87-010-176-020		C-CAP,S 680P-50 J SL
C212	87-010-176-020		C-CAP,S 680P-50 J SL
C213	87-010-400-040		CAP,E 0.47-50<D>
C213	87-010-382-040		CAP,E 22-25 SME
C214	87-010-400-040		CAP,E 0.47-50<D>
C214	87-010-382-040		CAP,E 22-25 SME
C215	87-010-318-020		C-CAP,S 47P-50 CH
C216	87-010-318-020		C-CAP,S 47P-50 CH
C217	87-010-101-040		CAP,E 220-16 SME<D>
C217	87-010-380-040		CAP,E 47-16 SME
C218	87-010-197-020		C-CAP,S 0.01-25 B
C219	87-010-196-020		C-CAP,S 0.1-25 F
C220	87-010-370-040		CAP,E 330-6.3 SME
C221	87-010-197-080		CAP, CHIP 0.01 DM
C222	87-010-186-020		C-CAP,S 4700P-50 B
C223	87-016-081-020		C-CAP,S 0.1-16 RK
C224	87-010-805-080		CAP, S 1-16<D>
C228	87-018-134-080		CAPACITOR,TC-U 0.01-16<D>
C230	87-018-209-080		CAP, CER 0.1-50V
C231	87-018-209-080		CAP, CER 0.1-50V
C231	87-018-134-080		CAPACITOR,TC-U 0.01-16<D>
C301	87-010-101-080		CAP, ELECT 220-16
C302	87-010-263-080		CAP, ELECT 100-10V
C305	87-010-318-020		C-CAP,S 47P-50 CH
C306	87-010-318-020		C-CAP,S 47P-50 CH
C307	87-010-405-080		CAP, ELECT 10-50V
C308	87-010-405-080		CAP, ELECT 10-50V
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-010-403-040		CAP,E 3.3-50 SME
C501	87-010-555-040		CAP,E 100-10 GAS<D>
C501	87-016-459-040		CAP,E 470-10 SMG
C502	87-010-197-020		C-CAP,S 0.01-25 B
C503	87-010-263-040		CAP,E 100-10
C503	87-010-555-040		CAP,E 100-10 GAS<D>
C504	87-010-196-020		C-CAP,S 0.1-25 F
C505	87-010-196-020		C-CAP,S 0.1-25 F
C506	87-010-196-020		C-CAP,S 0.1-25 F
C507	87-010-196-020		C-CAP,S 0.1-25 F
C508	87-010-221-040		CAP,E 470-10 SME<D>
C508	87-016-459-040		CAP,E 470-10 SMG
C509	87-010-196-020		C-CAP,S 0.1-25 F
C510	87-010-196-020		C-CAP,S 0.1-25 F
C511	87-010-221-040		CAP,E 470-10 SME<D>
C512	87-010-197-020		C-CAP,S 0.01-25 B<D>
C601	87-010-197-020		C-CAP,S 0.01-25 B
C602	87-016-251-040		CAP,E 220-16 SMG
C602	87-010-385-010		CAP,E 220-25<D>
C603	87-010-196-020		C-CAP,S 0.1-25 F
C701	87-010-322-020		C-CAP,S 100P-50 CH
C702	87-010-318-020		C-CAP,S 47P-50 CH

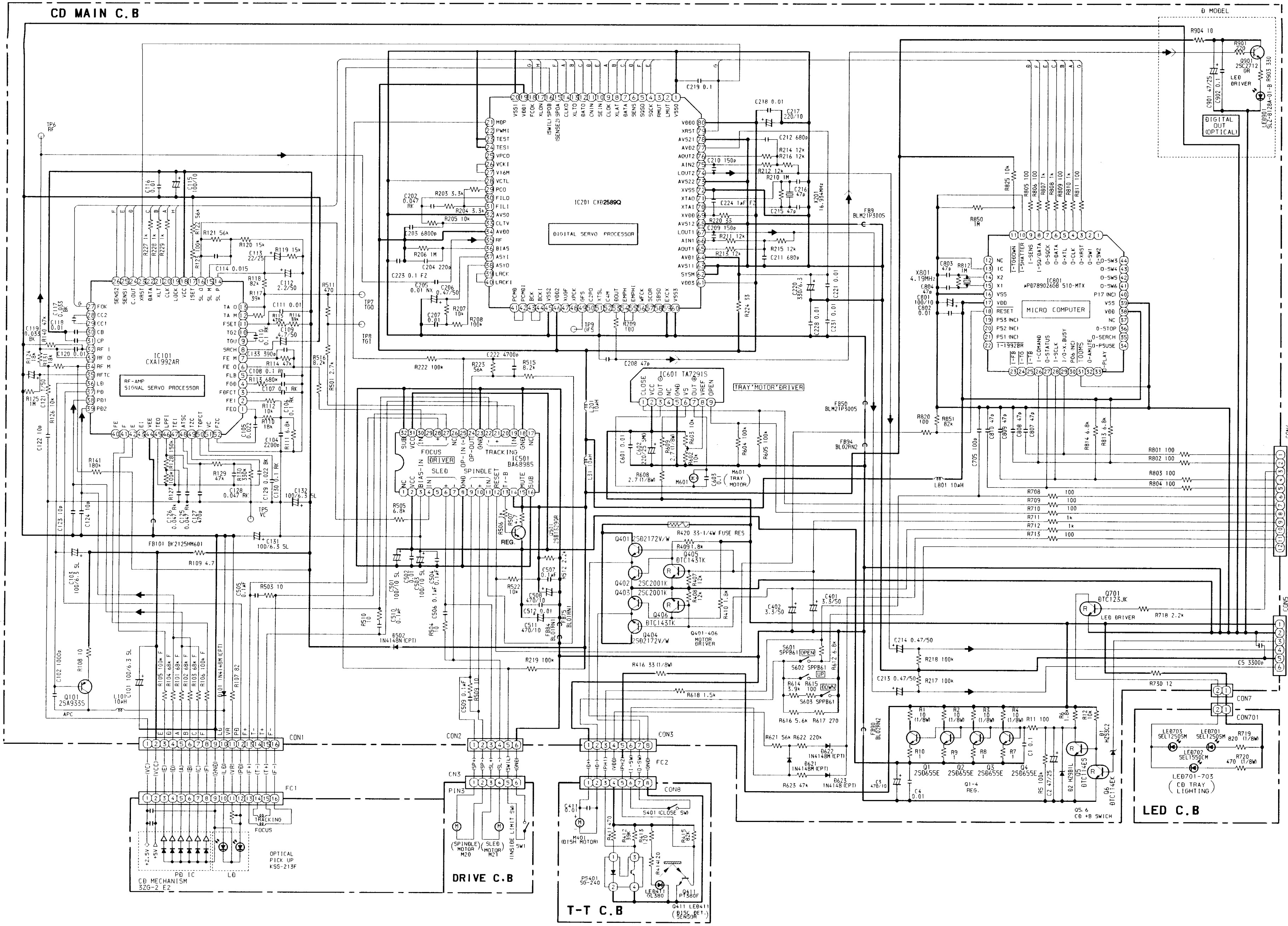
Pin No.	Pin Name	I/O	Description
41	O-SW6	O	Not used.
42	O-SW5	O	
43	O-SW4	O	
44	O-SW3	O	

IC DESCRIPTION

IC, µPD789026GB

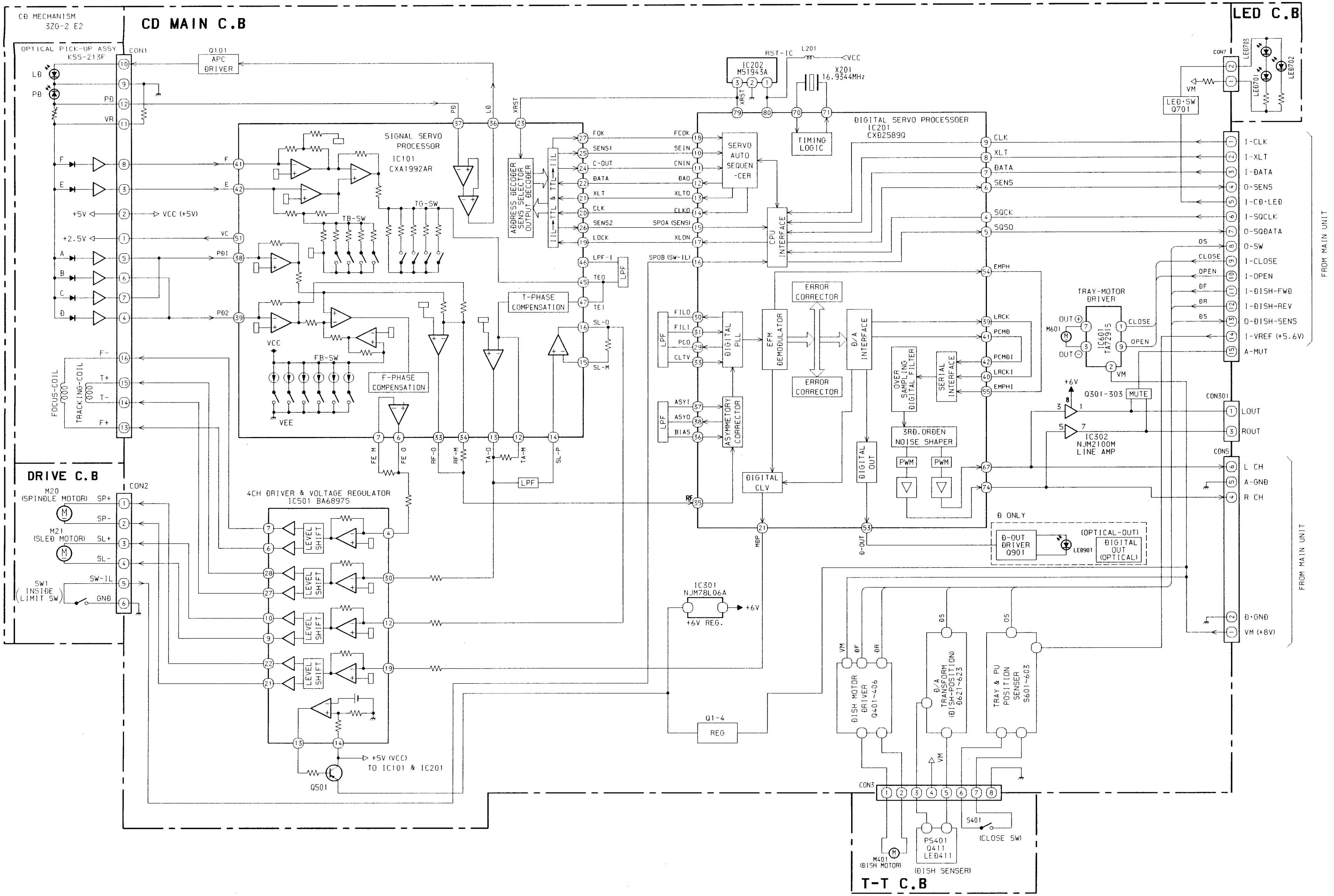
Pin No.	Pin Name	I/O	Description
1	O-SW1	O	Not used.
2	O-SW2	O	
3	O-XRST	O	XRST input to DSP. Low output during 100 m seconds after about 100 m seconds of resetting the system.
4	O-CLK	O	Clock input to DSP.
5	O-XTL	O	Latch input to DSP.
6	O-DATA	O	Data input to DSP.
7	O-SQCK	O	SUB-Q data read-out clock to DSP.
8	I-SQ-DATA	I	SUB-Q input from DSP.
9	I-SENS	I	SENS input from DSP.
10	I-SHATTER	I	Connected to GND.
11	I-TGDOWN	I	
12	NC	—	Not used.
13	IC	—	Connected to GND.
14	X2	O	Output terminal for external ceramic oscillator.
15	X1	I	Input terminal for external ceramic oscillator.
16	VSS	—	GND of microprocessor.
17	VDD	—	Power supply of microprocessor.
18	RESET	I	Microprocessor reset input.
19	P53	—	Not used.
20	P52	—	
21	P51	—	
22	I-1992BR	I	
23	I-FB	I	
24	I-TG	I	
25	I-TB	I	
26	I-COMMAND	I	Command input from main microprocessor.
27	O-STATUS	O	Data output to main microprocessor.
28	I-SCLK	I	O-status read-out clock from main microprocessor/Clock for I-command.
29	X-BUSY	I/O	Flag for confirmation of busy and ready with the main microprocessor.
30	P06	—	Not used.
31	100MS	—	Connected to GND.
32	O-AMUTE	O	Low output during playback only.
33	O-PLAY	O	High output during playback only
34	O-PAUSE	O	High output during pause only.
35	O-SERCH	O	High output during search only.
36	O-STOP	O	High output during stop only.
37	NC	—	Not used.
38	VDD	—	Power supply of microprocessor.
39	VSS	—	GND of microprocessor.
40	P17	—	Not used.

SCHEMATIC DIAGRAM



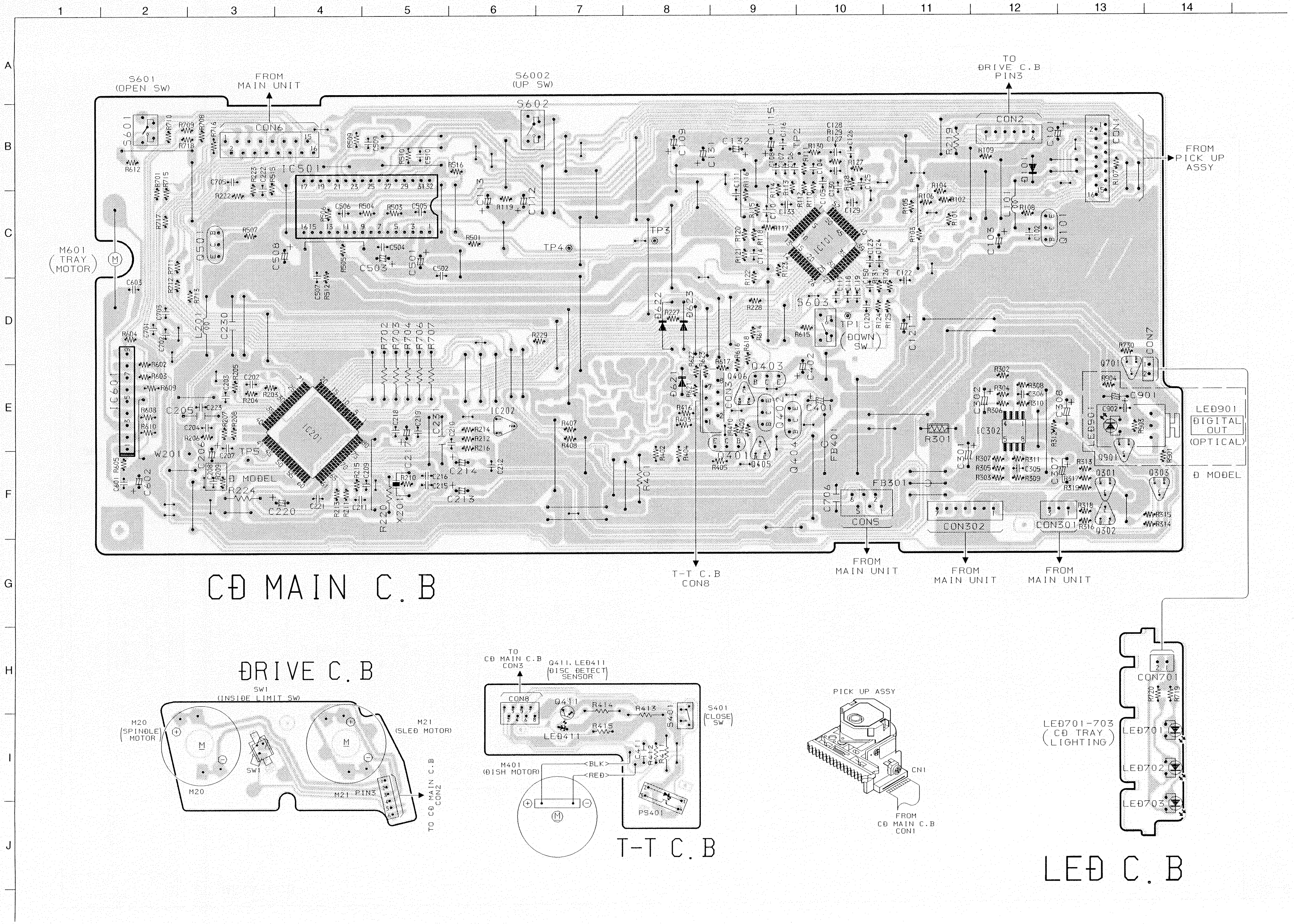
CD MAIN C.B
IC101 CXA1992AR
RF-AMP SIGNAL SERVO PROCESSOR
IC201 CXD2589Q
DIGITAL SERVO PROCESSOR
IC501 BA6898S
FOCUS DRIVER
TRACKING
SLED
SPINDLE
IC601 TA7291S
TRAY MOTOR DRIVER
IC801 μPD78902GGB 510-MTX
MICRO COMPUTER
X801 4.19MHz
X201 16.934MHz
Q401 2SD2172V/W
Q402 2SC2001K
Q403 2SC2001K
Q404 2SD2172V/W
Q405 DTC143TK
Q406 DTC143TK
Q401-406 MOTOR DRIVER
R420 33-1/4W FUSE RES
Q701 DTC123JK
LED DRIVER
Q101 2SA933S
APC
D MODEL
Q901 2SC2712 GR
LED DRIVER
LED901 SLZ-8128A-01-B
DIGITAL OUT (OPTICAL)
CON1
CON2
CON3
CON5
CON6
CON7
CON701
CON8
CN3
FC1
FC2
TO/FROM MAIN UNIT
I-BUSY
IN-CD/DATA
I-CD.LED
I-CD/SQ.CLK
O-CD/SQ.DATA
O-CD/SW
I-CLOSE
I-OPEN
I-DISH.FWD
I-DISH.REV
O-DISH.SENS
I-VREF
VM (+12V)
D-GND
CD ON
R CH
A-GND
L CH
Q1-4 2SD655E REG.
Q5 DTC114ES
Q6 DTC114EK
Q5, 6 CD +B SWICH
D2 MZ9BIL
LED703 SEL1250SM
LED701 SEL1250SM
LED702 SEL1550CM
LED701-703 (CD TRAY LIGHTING)
LED C.B
OPTICAL PICK UP KSS-213F
PD IC
LD
TRACKING
FOCUS
CD MECHANISM 3ZG-2 E2
(SPINDLE) MOTOR M20
(SLED) MOTOR M21
(INSIDE LIMIT SW) SW1
DRIVE C.B
M401 (DISH MOTOR)
PS401 SG-240
LED411 GL380
Q411 PT380F
Q411 LED411 (DISC DET.) SENSOR
S401 (CLOSE SW)
S601 SPPB61 OPEN
S602 SPPB61 UP
S603 SPPB61 DOWN
M601 (TRAY MOTOR)
T-T C.B

BLOCK DIAGRAM

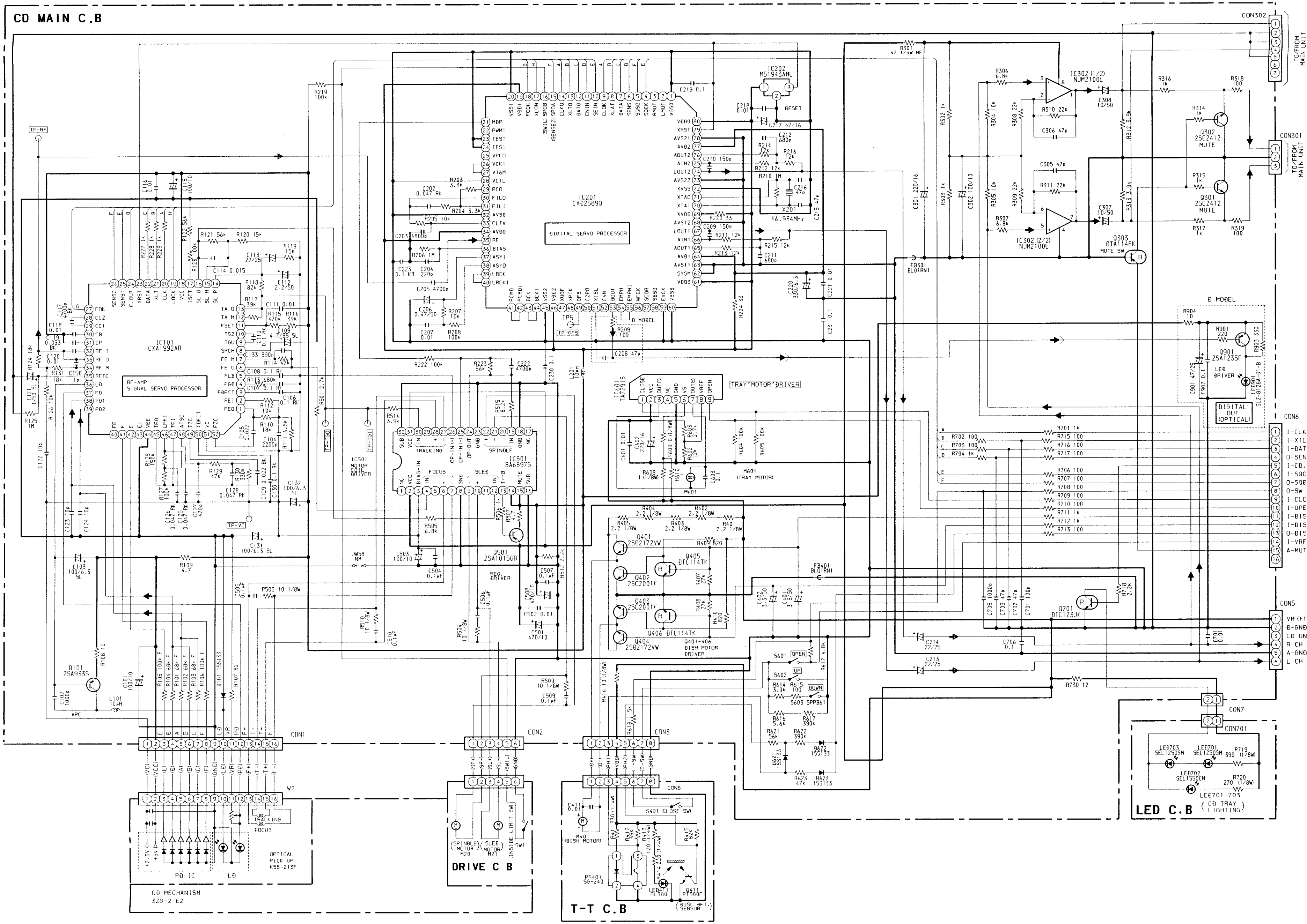


CD MECHANISM
3ZG-2 E2
CD MAIN C.B
LED C.B
OPTICAL PICK-UP ASSY
KSS-213F
CON1
Q101
APC
DRIVER
LD
PD
VR
F
E
+5V
+2.5V
A
B
C
D
VCC (+5V)
FOCUS-COIL
TRACKING-COIL
F-
T+
T-
F+
SIGNAL SERVO
PROCESSOR
IC101
CXA1992AR
TG-SW
TB-SW
FB-SW
VCC
VEE
F-PHASE
COMPENSATION
T-PHASE
COMPENSATION
ADDRESS DECODER
SENS SELECTOR
OUTPUT DECODER
TTL→IIL
IIL→TTL
XRST
FOK
SENS1
C-OUT
DATA
XLT
CLK
SENS2
LOCK
LPF-I
TEO
TEI
SL-O
SL-M
LPF
FE M
FE O
RF-O
RF-M
TA-O
TA-M
SL-P
RST-IC
IC202
M51943A
L201
VCC
X201
16.9344MHz
TIMING
LOGIC
DIGITAL SERVO PROCESSOER
IC201
CXD2589Q
FCOK
SEIN
CNIN
DAO
XLTO
CLKO
SPOA (SENS)
XLON
SPOB (SW-IL)
SERVO
AUTO
SEQUEN
-CER
CPU
INTERFACE
FILO
FILI
PCO
CLTV
DIGITAL
PLL
ASYI
ASYO
BIAS
ASYMMETORY
CORRECTOR
EFM
DEMODULATOR
ERROR
CORRECTOR
D/A
INTERFACE
OVER
SAMPLING
DIGITAL FILTER
SERIAL
INTERFACE
3RD.ORDEN
NOISE SHAPER
PWM
DIGITAL
OUT
DIGITAL
CLV
RF
MDP
D-OUT
CLK
XLT
DATA
SENS
SQCK
SQSO
EMPH
LRCK
PCMD
PCMDI
LRCKI
EMPHI
CON7
LED703
LED701
LED702
VM
LED·SW
Q701
I-CLK
I-XLT
I-DATA
O-SENS
I-CD·LED
I-SQCLK
O-SQDATA
O-SW
I-CLOSE
I-OPEN
I-DISH-FWD
I-DISH-REV
O-DISH-SENS
I-VREF (+5.6V)
A-MUT
FROM MAIN UNIT
DS
CLOSE
OPEN
DF
DR
TRAY-MOTOR
DRIVER
M601
OUT⊕
OUT⊖
IC601
TA7291S
Q301-303
MUTE
+6V
IC302
NJM2100M
LINE AMP
CON301
LOUT
ROUT
CON5
L CH
A-GND
R CH
D ONLY
(OPTICAL-OUT)
D-OUT
DRIVER
Q901
LED901
DIGITAL
OUT
(OPTICAL)
D·GND
VM (+8V)
DRIVE C.B
CON2
M20
(SPINDLE MOTOR)
SP+
SP-
M21
(SLED MOTOR)
SL+
SL-
SW-IL
SW1
INSIDE
LIMIT SW)
GND
4CH DRIVER & VOLTAGE REGULATOR
IC501 BA6897S
LEVEL
SHIFT
+5V (VCC)
TO IC101 & IC201
Q501
IC301
NJM78L06A
+6V REG.
Q1-4
REG
DISH MOTOR
DRIVER
Q401-406
D/A
TRANSFORM
(DISH-POSITION)
Q621-623
TRAY & PU
POSITION
SENSER
S601-603
CON3
S401
(CLOSE SW)
PS401
Q411
LED411
M401
(DISH MOTOR)
(DISH SENSER)
T-T C.B

WIRING


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
S601 (OPEN SW)
FROM MAIN UNIT
S6002 (UP SW)
TO DRIVE C.B PIN3
FROM PICK UP ASSY
M601 (TRAY MOTOR)
CON6
IC501
S602
CON2
CON1
IC601
IC201
IC101
IC202
IC302
TP1 (DOWN SW)
TP3
TP4
TP5
S603
CON3
CON7
LED901 DIGITAL OUT (OPTICAL)
D MODEL
CON5
CON302
CON301
FB301
X201
W201
T-T C.B CON8
FROM MAIN UNIT
FROM MAIN UNIT
FROM MAIN UNIT
CD MAIN C.B
DRIVE C.B
SW1 (INSIDE LIMIT SW)
M20 (SPINDLE MOTOR)
M21 (SLED MOTOR)
M20
SW1
M21 PIN3
TO CD MAIN C.B CON2
TO CD MAIN C.B CON3
Q411, LED411 (DISC DETECT SENSOR)
CON8
Q411
R414
R413
S401
S401 (CLOSE SW)
R415
LED411
M401 (DISH MOTOR)
BLK
RED
PS401
T-T C.B
PICK UP ASSY
CN1
FROM CD MAIN C.B CON1
CON701
LED701-703 (CD TRAY LIGHTING)
LED701
LED702
LED703
LED C.B

SCHEMATIC DIAGRAM


CD MAIN C.B
IC101 CXA1992AR
RF-AMP SIGNAL SERVO PROCESSOR
IC201 CXD2589Q
DIGITAL SERVO PROCESSOR
IC202 M51943AML
RESET
X201 16.934MHz
IC302 (1/2) NJM2100L
IC302 (2/2) NJM2100L
Q302 2SC2412 MUTE
Q301 2SC2412 MUTE
Q303 DTA114EK MUTE SW
CON302
TO/FROM MAIN UNIT
CON301
TO/FROM MAIN UNIT
D MODEL
Q901 2SA1235F
LED DRIVER
DIGITAL OUT (OPTICAL)
CON6
I-CLK
I-XTL
I-DATA
O-SENS
I-CD.LED
I-SQCLK
O-SQDATA
O-SW
I-CLOSE
I-OPEN
I-DISH.FWD
I-DISH.REV
O-DISH.SENS
I-VREF
A-MUTE
TO/FROM MAIN UNIT
CON5
VM (+12V)
D-GND
CD ON
R CH
A-GND
L CH
TO/FROM MAIN UNIT
IC601 TA7291S
TRAY MOTOR DRIVER
M601 (TRAY MOTOR)
IC501 BA6897S
MOTOR COIL DRIVER
TRACKING
SPINDLE
FOCUS
SLED
Q501 2SA1015GR
REG. DRIVER
Q401 2SD2172VW
Q402 2SC2001K
Q403 2SC2001K
Q404 2SD2172VW
Q405 DTC114TK
Q406 DTC114TK
Q401-406 DISH MOTOR DRIVER
Q701 DTC123JK
Q101 2SA9535
TP-RF
TP-VC
TP-FOO
TP-TCI
TP-SFS
FB301 BLO1RN1
FB401 BLO1RN1
S601 OPEN
S602 UP
S603 SPPB61
DOWN
CON1
CON2
CON3
CON7
CON701
CON8
W2
TRACKING
FOCUS
OPTICAL PICK UP KSS-213F
PD IC
LD
CD MECHANISM 3ZG-2 E2
SPINDLE MOTOR M20
SLED MOTOR M21
INSIDE LIMIT SW
SW1
DRIVE C.B
S401 (CLOSE SW)
M401 (DISH MOTOR)
PS401 SG-240
LED411 GL380
Q411 PT380F
(DISC DET. SENSOR)
T-T C.B
LED703 SEL1250SM
LED701 SEL1250SM
LED702 SEL1550CM
LED701-703 (CD TRAY LIGHTING)
LED C.B

CD TEST MODE

< How to Enter the Test Mode >

While pressing the SLEEP&OPEN/CLOSE key, insert the AC power cord to AC wall outlet.

< When the Machine Has Entered the Test Mode >

The system is initialized and the main power is turned on. During the test mode, the main power of the CD block is turned on always. The test mode starts with the [Sled mode].

< Types of Test Mode >

[Sled mode]

All displays of the FL tubes light. The optical pickup can be moved by pressing [《] or [》]key.

Pressing the [▷] key establishes the [Play mode].

Pressing the [《] key moves the sled to outer circumference.
Pressing the [》] key moves the sled to inner circumference.
Pressing OPEN/CLOSE key opens or closes the tray.

[Play mode]

Lighting of all displays of the FL tubes are turned off and returns to normal display. The focus search (numbers of search is unlimited) is performed. When focus comes to in-focus, the focus servo is locked in and the machines enters the normal play mode.
During [Play mode], GFS and sound skipping are not monitored.
When focus becomes out-of-focus, another attempt is made to search for focus.
The tracking servo and the sled servo can be turned on and off by pressing the [▷] key.

Pressing the [□] key establishes the [Sled mode].
The [II] display can be turned on and off by pressing the [▷] key .

While the [II] display is turned off:
CLV-A Tracking servo: on
Sled servo: on
While the [II] display is turned on:
CLV-A Tracking servo: off
Sled servo: off

Pressing the [《] key decreases the track number to -1.
Pressing the [》] key increases the track number to +1.
Pressing OPEN/CLOSE key opens or closes the tray.
The machine enters the [Sled mode].

< How to Exit the Test Mode >

Remove the AC power cord from power outlet, or turn off the system power.

USE MODEL LIST

- XC-30M
- DX-Z9450
- CX-NMT960
- CX-ZR880
- CX-ZR990
- CX-ZR770
- CX-ZR774
- CX-NF959
- CX-NF958
- CX-ZR550
- CX-NA959
- CX-ZVR99
- CX-ZVR80
- CX-ZVR88
- CX-NAVF960
- CX-NMT960
- CX-ZR700